

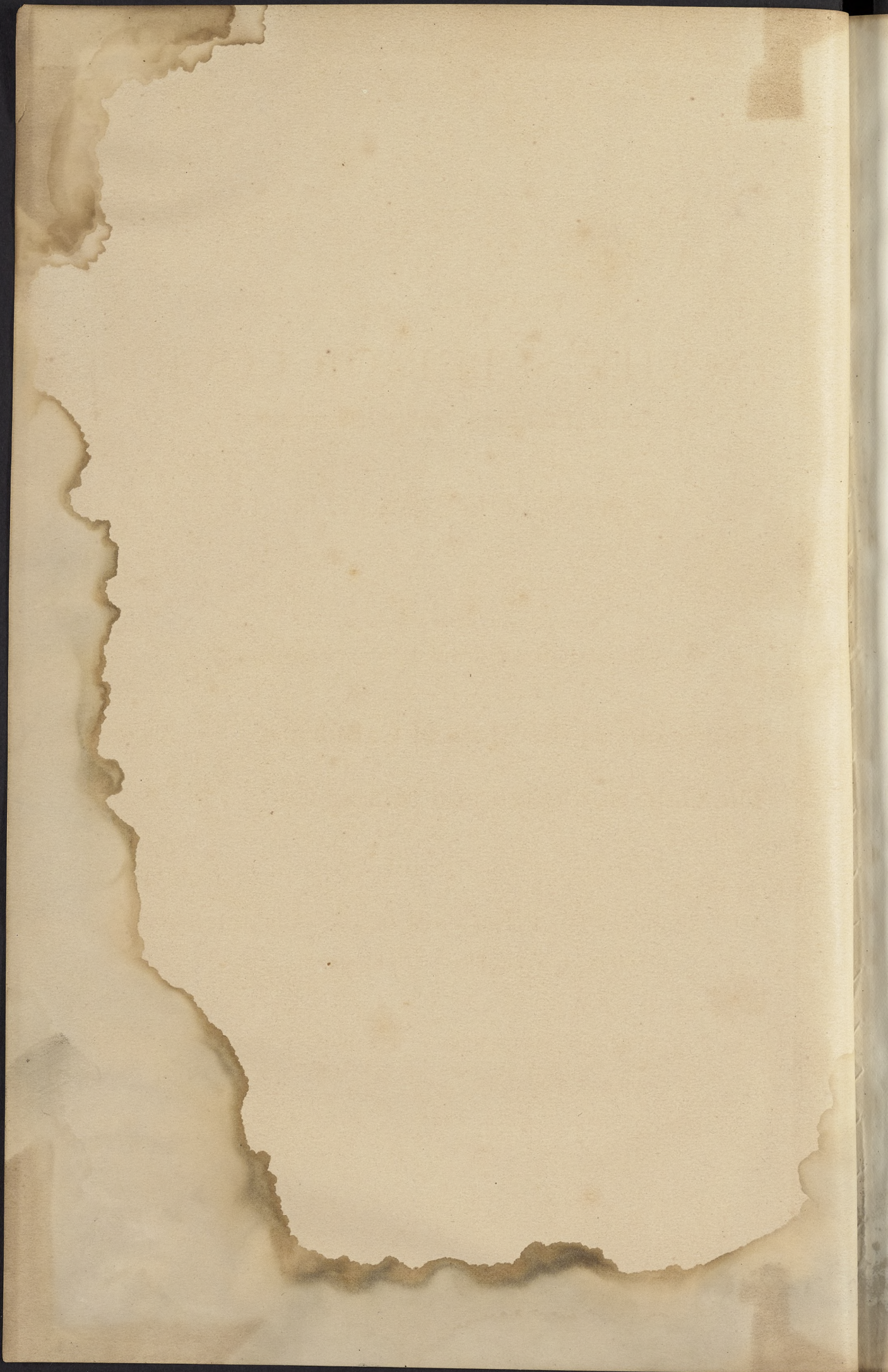
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VOLUME 14.

IN THE SUPERIOR COURT,

State of California, County of Sacramento.

OCTOBER SESSION, 1881.

HON. JACKSON TEMPLE, - - - - - PRESIDING JUDGE.

WINFIELD J. DAVIS, OFFICIAL REPORTER.

SAMUEL OSBOURNE AND WILLIAM M. CUTTER, REPORTERS.

The People of the State of California,

vs.

The Gold Run Ditch and Mining Co.

COUNSEL:

For Plaintiff,

HON. A. L. HART, Attorney General, GEORGE CADWALADER, ISAAC S.

BELCHER, A. L. RHODES, RICHARD BAYNE.

For Defendant,

J. K. BYRNE, W. C. BELCHER, S. M. WILSON, W. T. WALLACE, A. B.

DIBBLE, A. P. CATLIN.

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In the Superior Court
of the State of California
in and for the County of
Sacramento

The People of the State of California vs. The Gold Run Ditch and Mining Company	}	Afternoon Session Tuesday Decr. 6 th / 81
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Winfield J. Davis
Official Reporter

Afternoon Session

Cross Examination

of John H. Roberts

<resumed>

Mr Belcher Q Were you up the river in 1861-2 as far as Jacinto? A I was as high as Colusa

Q During the high water of that year?

A Yes sir

Q In the high water of that Winter Say in January how was the water at Eddy's Landing in respect to the then bank of the river at its highest? A Well it ran over the banks. If I recollect there were no levees then. It ran over all along the banks both sides of the river, from 4 to 6 inches deep I should judge

Q From 4 to 6 inches deep

at Eddy's Landing?

Awell all over. I do not exactly as to Eddy's Landing; I could not say for certain; but on the opposite side from Eddy's Landing anyhow

© But I want to have you recall to your recollection the condition at Eddy's Landing and from there on ^{up} to the Grand Island Mills

Mr Start Of course it is understood that all this goes on subject to our objection and exception

Awell it is all under water more or less as near as I can recollect

© By Mr Belcher According to your recollection the water was flowing over the bank there all the way from the Mills down to Eddy's Landing?
Ayes.

Q To a depth of three or four inches?

The Court 4 to 6 inches

Mr Belcher How deep has the water been since that time over the natural banks; since the levees were built, how high above the natural banks?

A Five feet

Q And that every Winter every Winter of high water? Say in the Winter of 1872-3, the Winter of 1875-6, the Winter of 1877-8, 1878-9 and 1880-81?

A It always is the case, unless the levees break it comes up that high. They always let go about the time it gets pretty near to running over the top. In some place it gives way or some person goes and cuts the levee and lets it out

Q And the effect of a

break or a cutting - no matter from what cause it may come - is what?

a It lowers the water in the river

Q And the extent of the lowering depending upon the size of the break?

Ayes.

Q Now last winter or at any time since levees were constructed has the mouths or the openings of those large sloughs have any of them broken out?

A Yes at Bouness's sloughs or any of the lodge sloughs above Colusa on the West bank of the river has there ever been a break through the sloughs?

Ayes.

Q Which? A The slough below Eddy's landing there. I cannot think of the name

Q Wilkin's slough? Ayes

Q How large a slough is

that? I mean how large a sluice was it before the filling?

A the same dimensions as the Pycamore I should say about

Q About the same width and depth? A Not so deep. About as wide

Q About the same width on top between the banks. A Yes.

Q It is the upper Pycamore ever given way?

Mr Start I would like to enquire what the object of this examination is. Is the object of the examination as to the breaking of levees up there?

Mr Belcher As to the effect of those levees the object is to show that these levees have affected the water here.

The Court I understand it

Mr Start But the breaking

of the levees could not afford it

Mr Belcher Yes.

Mr Sturt Do you mean to say that you expect to prove by this witness that it has? You give your assurance of that as a member of the Bar?

Mr Belcher I do not give any assurance at all.

Mr Sturt I insist that the Counsel shall state what he expects to prove by this witness. There can not be any such thing proven by this witness or any other.

The Court This is all going in under the exception I do not think there is any misunderstanding.

Mr Sturt Well we object to it as not cross examination and except to the ruling of the Court.

Ayes

Mr Belcher Q When?

at the first high water
after it was constructed;
I do not know what year.

Q It was constructed in
1872

Mr. Cadwalader Are you
testifying?

Mr. Belcher I understood
you to state yourself that
it was constructed in
1872

Mr. Cadwalader No sir.
I am not testifying. But
if you call me I will state
that I have not been there
and do not really know
I suppose what you want
to get at is this: that that
was cut at one time

Mr. Belcher It has never
been cut ^{at} all. It was
another place that was
cut. What I want to prove
is, whether since the first
building of the dam
at the head of Upper

Sycamore Slough it had
ever been broken.

A It gave way I think

Q You think that did give way? A Yes

Q When?

Mr. Caldwell The object to this is tending to prolong the case and as going into collateral matters.

<Objection overruled>

A It was the first season after constructing it.

Q Do you remember when it was built?

A Well I do not recollect it was either 1872 or 1873 or somewhere about that time. I carried up the material to Sheep pile it the dam

Q That was in 1872 or 1873? A Yes.

Q Was the levee that Spear built all the way from Knights Landing up to the head of Grand Island including the

upper Pycamore in District
No. 108. ? A It was
under way of being built;
I do not know exactly
what year. Rose Hemmon
were the Contractors

Q Do you remember the
winter of 1871-2; whether
it was a winter of high
water or not? Do you
remember any winter when
the first rains commenced
mid December, the
first rains of the season?

A I recollect some year
it commenced the 26th
of December. I cannot
tell exactly what year
it was.

Q Do you remember as
to the winter of 1871-2
whether the water was
very high or not?

A I could not tell. I
have not got anything
to refresh my memory
on exactly

Q Do you remember whether

or not in the winter of 1871-2 it became necessary to cut the levee at Knight's Landing?

Mr Stark I object; the Counsel can ask as to the fact.

Mr Belcher Very well. As to the fact. I do not care whether it became necessary or not.

Mr Badwalader I would like to have the relevancy of that question shown.

Mr Belcher The relevancy is to refresh the witness' recollection as to a point.

Mr Badwalader That does not make it relevant.

Mr Belcher I am simply trying to refresh the mind of the witness on some dates if I can.

Mr Badwalader These points are 40 miles apart.

Mr Belcher The witness said they were 20 miles

apart following the river;
the upper and the lower
Sycamore Slough.

The Court What is the
question? When that
was done?

Mr Belcher Yes sir.

The Court I suppose the
proper question is if
he knows that was cut
in 1872 if that reminds
him that there was a
levee there. Proceed.

The Witness I recollect
reading an Account
in the Sacramento Union
of Charles F Reed's house
there —

Mr Adair (int) I
object to what the
witness read in the
Sacramento Union

Mr Belcher It is to get
your own knowledge if
you have any in regard
to it, so as to fix dates

A I do not remember
seeing them cut the levee

or of being at Knight's Landing at any time when they cut the levee

Q You could tell whether there had been a breach made in the levee there through which the water was pouring out?

A I never saw them cut the levee at Knight's Landing

Q You said that the dam at the Upper Sycamore Slough was broken presently after it was first raised?

A After the first raise

Q Was it immediately repaired or repaired the first season?

Mr. Caldwell The object is that as irrelevant

<Objection overruled>

Mr. Belcher Q Was it repaired the next season?

A It was.

Q Has it remained ever since so as to effectually

close that plough?

Ayes

Q I have all the other deep sloughs from the Upper Sy camore and from there up to Stony Creek been dammed

Mr. Caldwell ~~Mr. Caldwell~~ subject to that as irrelevant.

<Objection overruled>

A From Jainto to Princeton there have been on the West side more or less dams

Q You say from Jainto to Princeton? Ayes.

Q I am now talking of ploughs, not of the ordinary bank of the river. I have they from Princeton down to the head or the Upper Sy camore? Ayes.

Q They have from the Upper Sy camore to Knight's Landing? Ayes.

Q Did any of those ploughs break last winter? A not to my recollection

Q The only breaks then that there were last winter were over the natural banks and through the levees that were built on them?

Mr Badwalader We object on the ground that the witness has already answered the question.

A There was general demoralization of the levees more or less.

Q I say, the breaks were not at the sloughs but at the natural banks were they or were they not?

A Over the natural and unnatural banks.

Q Unnatural? Ayes.

Q What do you now mean by unnatural?

A Where they had been washed out and patched up.

Q That is where the levee had been? Ayes and banks.

Q Those washes have occurred since the building of levees and before?

A Since

Q On the East side do you know whether or not Butte slough has at any time been also dammed

A It was dammed by the Parks dam

Q Do you know when or about when? A I do not recollect the year. It was several years back. I have not got that down exactly to the year. I know it was several years ago

Q Were you up the river?

Mr Hart This has nothing to do with the Sacramento river

Mr Belcher The Witness has said that Butte slough put out from Sacramento river and I ask him if that slough had ever been dammed

The Court Running out
from Sacramento River.

Mr Belcher Yes.

The Witness I have never
been out from the banks
of the river down to Park's
dam. I would not swear
to that.

Q That is ever had been?

A No. Only I have seen
a big dam which they
call Park's dam going
on the stage I have
seen it

The Court It is a slough
going out of the river
that they ask you about

A I believe that goes
into the mile system of
drainage; Butte slough

Mr Leudwalader Butte
Creek? A Butte Creek

Mr Belcher I am not
asking you about Butte
Creek but Butte Slough
Do you know whether or
not that slough was
dammed so that the water

from the river could not pass into the basin below what is called the Butte hole? A I never was on the ground there

The Court If you do not know, say so.

A I do not know. all I know is it was Parks dam backed the water up

Mr Belcher While that dam was in existence did it or did it not affect the height of the water in the river below the head of it, below the head of the slough to your knowledge?

Mr Goodwalader Yes or just to that as irrelevant. It calls for the history of the Parks dam which is on an inland water course and concerning which nothing has been asked in the examination of witnesses, on our

side

The Court < To Witness >
Counsel asks you if you know

Mr Belcher @ What effect has it had?

A It raised the water in the river

@ To what extent?

As well to flood all the country up above the farms - to submerge them.

Mr Bayne @ That is above the dam? Ayes.

Mr Belcher That is not the question I asked you I asked you of the river below; if it had any effect on that, and if it did have any effect, what so far as you observed? A It raised the water in the river

@ How much?

A Up to the top of the levees

@ How many feet approximately

if you know? A well I should think the levees were five or six feet high and it raised up to the levee and broke in many places.

Mr Start Q Do you speak of while the dam was there or after it was cut down? A well about the time of high flood, before the dam gave way it broke the levees

Mr Belcher Q What is the extent of you know, of the basin in Butler County the full basin?

Mr Caldwell Does your Honor understand that Parks' dam has not been there for several years?

The Court I do not understand anything about it except what this witness has said

Mr Start This is examining about a defunct dam.

Mr Belcher Do you know as to the extent of that further basin, further tule

Mr Cadwalader We object to that as not in crop-examination. The further tule is a piece of land that holds about 100,000 acres

The Court. Do you mean, Mr. Belcher, that it would have been filled by this slough if it had not been dammed?

Mr. Belcher Yes sir

The Court. Proceed.

Mr. Hart. We except to the ruling

A. It is a large extent of tule between the Sacramento and Feather river from Fremont up. I shined gauge it was 15 miles long and an average of 7 miles wide

Mr Belcher. And the depth how deep was it?

A Well, on a level in high water from the Sacramento and Feather River? I do not know how deep it would be

Q You do not know at all about the depth there?

A No.

Q Has there been on the bank of the River from Eddy's Landing down to Sacramento and from Sacramento down along the bank of the river to Cache Slough, a levee

Mr. Cadwalader. On which side of the river?

Mr. Decher. On the west side of the river.

Mr. Hart. We make the same objection; that it is not proper cross-examination and it is irrelevant and immaterial.

Objection overruled. Plaintiff excepting.

Q There has been a levee built

Mr. Decher all the way?

A At different times - yes.

Q A few feet higher approximately above the natural bank?

Mr. Cadwalader. I suggest

that the Counsel takes the section of the river

Mr. Hart. Oh No! Then we could never get through

A. The height was from four to ten feet

Q Were you in the winter of 1861? During the highest water of that year up and down the river from Knight's Landing to Cache Pough?

A No, from Knight's Landing to Sacramento

Q Was there at that time any levee on the west bank of the Sacramento between Sacramento and Knight's Landing?

A I do not recollect of any excepting right near the City here there might have been

Q How was it then with the water? did it pass over the banks all along or not

Mr. Hart. We object to that as irrelevant, immaterial and not a subject for cross-examination

Objection overruled—

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Ex

Plaintiff Excepting
A. It did

Mr. Belcher To what depth?

A. I should judge from
four inches to a foot deep
2 At that time had the
sloughs putting out from the
river, or prior to that time
been filled along in that course

A. Yes

Mr. Cadwalader Ask him
whether there were any
sloughs

A. Of course, all the sloughs
would be full if the banks
were full

Mr. Cadwalader Testimony of
that kind would leave the
inference open to argument
that the country was full of
sloughs

The Court. I think you may
explain it on redirect Exam-
ination if you think it liable
to mislead

Mr. Belcher I do not think
you understood my question.
If I understand your answer

it was that the sloughs would be filled with water, if the water was running over the banks? A Yes.

Q What I meant to ask you was whether those sloughs between Knight's Landing and the bank of the Sacramento river had been prior to that time filled up with earth? A No.

Q There had been no leveeing then along the bank of the river prior to that time?

A I do not recollect of any excepting near the City here

Q How was with the other bank of the river, the East bank of the river, between the same points: from Knight's Landing down to the City

A Just the same

Q Water pouring over the banks? A Yes

Q And to a depth about the same as the other? A Yes

Q How was it in the winter of 1867-8? A The water

Was over the banks; not so long a time though.

I. But as deep?

A. No, not quite

I. Not quite as deep? A. No

I. How deep would you say in the winter of 1867-8?

A. Well, there were levees then to some extent built - had been. There were more levees built then. There was a levee built if I am not mistaken, on the west side of the Sacramento clean up to Fremont and one on the East side too

I. On both banks?

A. Yes, on both banks.

I. And yet you say the water flowed over the bank all the way from here to Knight's Landing during that winter?

A. Yes

I. Over the west bank, not withstanding the levee?

A. Yes, it broke on the East side; the back water came up on a level with the river in the most of places

Q. I am talking of the west bank now?

A. On the west bank it broke most all the way along between here and Fremont.

Q. Did the water then run over the top of the levee all the way along?

A. No. Only in the places where there were breaks.

A. Yes.

Q. Was the water then in the river as high or higher than it had been in 1862?

Mr. Hart. When was that Mr. Belcher. In the highest water of 1867-8

A. Of course, it would be higher because the levee kept it in.

Q. It was higher?

A. Yes, in the river; between the levees it was

Q. How? A. Between the levees it was higher.

Q. Well the river was between the levees?

Mr. Hart. In 1867-8

Mr. Belcher In 1867-8

A. Yes.

2. How much higher than it had been in 1861-2?

A. Well, that is hard to tell. It is owing to how much the water is confined. It was very high here at the City, extremely high.

Mr. Hart. If this is to be a very long Examination I will admit that the water gets higher when confined.

A. I need not tell how many feet but it was very high here at Sacramento, at the City, at that time.

Mr. Hart. How is that?

A. It was very high in 1867-8 at the City here. I need not tell how much higher than it was in 1861-2 on an average.

Mr. Belcher You need not tell how much higher it was in the river above between this and Knight's Landing?

A. No.

2. But at that stage it was

higher? A. Higher here

Q. Was it higher there? was the river higher all the way from Knight's Landing to Sacramento in 1867-8, in its highest water, than it was in 1861-2

Mr. Hunt. Do you mean between the banks?

Mr. Belcher. I am talking about the banks.

A. It was higher in account of the levees than it was in 1861-2

Q. It was higher as a matter of fact then, was it?

A. Yes.

Q. That's what I want to get at? A. Yes. Just on account of the levees that is all that kept it higher.

Q. Now below this City and between this and the head of Grand Island was the water higher in 1867-8 than it was in 1862?

A. I think it was. It was below here, right near the City.

Q. Did you go down the river during the high water of

1867-8? A. Yes.

Q Did you notice whether it was higher than it was in 1861-2? A It was higher right in the river on account of the levees, but it broke through away there in a bend and that let it out, and after that it was not any higher, nor so high as it was in 1861-2.

Q How large is this basin on the other side, this tule basin on the west side of the river? What is its length?

A I do not know. I have never seen the measurement of it on the map; I have never looked. I should judge

Mr. Stark (Intg) You need not make any guess. Witness Well, I do not know how long it is.

Mr. Belcher You only know the length along the river?

A Yes.

Q How wide is it?

A The tule basin?

Q. yes. A Well, I do not know I never measured it, I have been across it on the railroad and in Stuffs plenty of times

Q Sailing up and down the river for twenty years, have you formed a judgment about the width of that water basin?

A Yes

Q What is it?

Mr Hart. We object on the ground that the witness is not competent to testify as to that. Sailing up and down the river does not make him a competent witness to that

The Court. He can give his estimate of it

A. From six to ten miles wide

Q And how deep?

A. At high water?

Q Yes. A. The deepest part sixteen feet. It runs out to the top of the bank toward the river

Q You have already said you

Do not know where the zero point on the gauge in this City was, the low water mark of 1849. Do you know the difference between the low water level of 1849. 1850. 1852. 1853 or any of these years, when you first knew the river? I think it was 1853 when you first knew it, was it not, or was it later than that?

A. 1854 was the first time I ascended the Sacramento

Q When did you become acquainted with it so that you knew something about it?

A. 1853; the summer of 1853.

Q Then taking that year, the low water of 1853, that was after the heavy flood of 1852-3 was it?

A Yes.

Q And that flood occurred in the Spring - February?

A. It commenced raining the 22nd of November 1852

Q Was not the highest water of fall in the Spring - February and March?

A. If my recollection serves
me it commenced raining in Nov-
ember. It brought on a flood,
about the highest water about
Christmas time

2. Do you know whether the water was quite as high and continued high through February and March?

A. The water stood up over the banks where I was living below Knight's Landing for 11 weeks.

2. Eleven weeks commencing about Christmas?

A. It commenced - yes, about Christmas I should think.

2. Do you know, or do you know now approximately where the low water was in that year, at this ^{city} ~~time~~ where you were living ^{near} ~~at~~ Knight's Landing?

A. I was living below Knight's Landing running a wood boat on the river.

2. You were on the river then?

A. Yes sir.

2. Now have you any idea as to the difference between the low water mark at this City of 1853 and the low water mark of this present year of 1881?

A. Oh, I have some idea
 Mr. Hart. At Knight's Landing?
 Mr. Belcher. At this City

A. Yes sir

Q What was the difference or
 is the difference in feet?

A I should judge seven feet

Q Seven feet. Were you
 then acquainted with these
 shoals below the City called
 Haycock's? A No sir

Q You were not acquainted
 with them? A No sir

Q When did you become acquaint-
 ed with those shoals?

A After 1866. In May 1866

Q What was the depth of wa-
 ter on those shoals in 1866 at
 low water - Haycock's shoals.

A We used to get 8 or 10 feet
 of water

Q What was the depth of wa-
 ter on those shoals in 1881?

A About five feet

Q Was that the deepest water?

A Four and a half feet or
 five

Q Was that the deepest water

A. Well, that is about the average

Q I asked you if that was the deepest water?

A At low water?

Q In low water?

A It might be six feet the deepest

Q Did you measure the water or not? A. I have seen it sounded, men with a pole singing out

Q Or you give that as the measure of the water in the deepest part of the channel or at some other point?

A In the neighborhood of the wing-dam there

Q I asked you if it was in the deepest part of the channel? A. Well, what they call Han cock shoals there, the channel, that is what I have reference to.

Q Did you measure or see measured the depth of the water on those shoals in 1866 at low water, I mean at the

lowest water of the season,
practically that².

A Well, I had no occasion
to measure — plenty of water

2. When you stated that it
was six feet or ten feet that
is a mere approximation or
a guess without any measure-
ment² a Noan, I could

tell by the look of the water

2 How deep it was²

a Season

3. You have spoken of the
Old River, do you know whether
or not that river is deep-
er in channel, or not so
deep as it was ten years ago

a Deeper in one place

2 What place²

a The head of that Island,
the first Island above Rio
Vista

Mr Hart. You say it is deeper
now than in 1866 at one
place² a Season

Mr Belcher. That is at the
head of an Island, where
is that Island situated²

A. About a mile and a half below Ileton

Q. Is that the only place?

A. The only place I know of

Q. Is it not true that at low water, at the lowest water of summer, that larger boats can come up the Old River now than could come in 1862?

A. I was not in the river in 1862, below here - in 1866 and 1868 I was

Q. I believe in 1866. Is it not true that boats of larger draft can come up the Old River now - could have come at any time during this summer, than could have come in 1866?

A. With the exception of that bar, that is all

Q. Where is the bar?

A. A mile and a half below Ileton

Q. Well, is that bar shallower now than it was then - is the water over that bar - speaking of the Old River

A. There is more water and has been the last eight years more than there used to be prior to from 1868 up to 1874. After that there has been more water.

Q. Let us come back again to that bar and the water on the bar, is the water shallower on that bar now than it was in 1866?

A. No sir.

Q. Is it deeper?

A. It is said to be.

Q. Don't you know about it whether it is or not?

A. Yes sir.

Q. State whether it is, or not?

A. It is.

Q. Well then, is it true that vessels of larger draft can come up Old River now than could have come in 1866 when you first knew that river?

A. There is one thing if you will permit me.

Q. I should like to have you answer the question first

and then if there is anything
to be said about it you can
explain.

A. My opinion then is, that
larger vessels could navigate
it before at high tide, that
is my recollection. At low
tide they could not.

Q. At low water a larger
vessel could come now than
could have come then?

A. Yes sir, at early days
at high tide there was more
water to float them there
than there is at the present
time.

Q. At low tide?

A. No sir, at high tide.

Q. Well, will you answer
for low tide?

A. No sir, there is no tide
now, there is not water
enough for them to come up.

Q. Well, I ask as to the
comparative draft of vessels
which could come up that river
at low tide, at the lowest
stage of the water from

1866 to 1881?

A They could not get up, as heavy vessels get up there now, as there could in 1866 in high tide at present, they can not do it, there is not so much water on the bar

Q On the bar which you spoke of?
A Yes sir

Q Then I did not understand you correctly before?

A No, there is more water now I would say, but the high water came up and could float them off before in early Aug. I should judge, enough to make up the discrepancy now, or I would say, what it has increased

Q Do you know the height that it had at that time or now at that point?

A Well, the tide used to rise about 2 feet and a half

Q Two feet and a half there at that Island?

A Yes sir

Q How high does it rise

Now at the same point

Q. It generally raises a-
bout 18 inches

2. One foot and a half while
it formerly raised two feet and
a half? A Yes sir

2 Then I ask you again if
larger vessels or vessels of
larger draft can come up
the Old River now, than could
have come up the same river
in 1866 or at any time prior
to that date - That however
is the time when you first
knew about it?

A Yes sir they can

2 Now, you have spoken
of the change from vessels
of large draft to vessels of
light draft? A Yes sir

2. Was not that made for
the convenience of commerce
and the men engaged in shipping
on the river? A No sir

2 Because it was cheaper?

A No sir

2. Was that change made a-
bout the time when the Rail -

roads came in here, the Central Pacific and the California Pacific? A Lesson

Q It was not made then when was it made, the Charge?

A From necessity

Q When was it made and in what year? A You mean light draft boats?

Q Yes sir. A Well, the water got so —

Q (Int'g) No matter how the water got — Please tell me the time?

A I should judge about 10 years ago

Q Ten years ago, that would be in 1871? A Lesson

Q Had the Central Pacific or the Western Pacific commenced running at that time?

A The Western Pacific?

Q Was there a railroad between here and San Francisco in 1871? A Lesson

Q Was there a railroad from this City to San Francisco by way of Benicia? A Yes sir

2 At the same time?

Q Yes sir by Tallesio

2 Then at the time that
 Mr. Chayer was made from
 heavy draft or deep draft to
 light boats there were two
 Railroads running between
 San City and San Francisco
 were there? A Yes sir
Mr. Cadwalader. There were
 two railroads one to San
 Francisco and one to Vallejo
Mr. Belcher Did these light
 draft boats take barge?

A Yes sir

2 Carry in their freight prin-
 cipally upon barge?

A The up river boats do

2 And the low river boats?

A They run themselves

2 How is it in the harbor
 and about the bay of San
 Francisco, of Suisun Bay,
 and all about the bay, is
 that by barge, or upon the
 boats? A There are

two classes of boats

2 Are the boats used upon

the bay light drafts boats
or heavy - deep - freight
boats for transportation?

A Now what destination I
should like to know have you
reference to for the boats to run?

Q The trade to the Islands.
Mr. Cadwalader What Islands
Mr. Belcher. The Lule Islands,
Sand Island, Sherman Island
and up the San Joaquin River.

A They are light draft boats

Q With barges?

A Yes Sir, and without barges
too

Q. Have they plenty of water?

A No Sir

Q You say no? A No Sir

Q. How deep water have they?

A From three and a half
feet up

Q Is the water in the bay of
San Francisco three and a
half feet? A No Sir, but
in the rivers

Q. Is it so in Suisun Bay,
three feet deep? A No Sir

Q. Is it so at any point up

to the islands in the San Joaquin River?

A. I never navigated the San Joaquin only I have been on a boat to Hills Ferry from Stockton, it was shoal water at low water very shoal

Q. Is it not a fact that these boats were adopted with barge and light draught, because it was cheaper to run them, and hence, in a commercial point of view, they were better? A. No sir

Q. You say that is not the reason? A. It was necessity

Q. Prior to 1870, did your company run deeper boats than they run now?

A. Yes sir

Q. How deep? A. Drawing $4\frac{1}{2}$ feet of water

Q. How much now?

A. Three and a half to four feet

Q. What boat did you

have drawing $4\frac{1}{2}$ feet?

A. I had scows. The Princeton is one. Barges or whatever you might call them, scow barges.

Q. Well, now, you have the San Joaquin, No 1? A. No, sir.

Q. You have not that now?

A. It is out of existence.

Q. San Joaquin No. 2 you have? A. Yes sir.

Q. How much did San Joaquin No 1 draw?

A. Three and a half feet.

Q. And the San Joaquin No 2? A. Two feet high.

Q. And heavy? A. Four.

Q. When did you build San Joaquin No 1?

A. I bought her already built.

Q. When? A. 1866.

Q. Then you had a lighter draught boat at that time, than you have now. When did you build San Joaquin No 2, or buy her? A. In 1875.

Q. What other boats have

you or your company running now? A. Two boats.

Q. What are they?

A. The San Joaquin No 3 and the Varuna, a steamboat.

Q. Well, the Varuna, how much does that draw?

A. Light or loaded?

Q. Either one?

A. Sixteen inches light, and 2 feet loaded.

Q. Sixteen inches light, and 2 feet loaded. How long have you had that boat?

A. Since 1873.

Q. The San Joaquin No 3, how long have you had that?

A. Since 1877.

Q. Now is it not a fact that you can carry freight cheaper on these light draught boats, with barges, than you could have carried it or than it could have been carried on those deep vessels of heavy draught, like the Senator, or any of those larger vessels?

A. It depends on where it hailed from

Q. Hailing from any place on the Sacramento River, or between San Francisco and Red Bluff?

A. The river above Calusa
 Q. You can answer that question directly, without going into an explanation, and then you can explain afterwards - read the question? (Question repeated.)

A. I do not consider that is a proper question to ask

Q. I want you should answer it whether it is or not?

A. One way I could, and one way I could not; now, how are you going to get at it? The head of the river is always shallow, on the mouth of the river is the reverse to what it used to be, from being deep it is shoal

2. Without regard to shoaling, or without regard to the depth of water, I ask if it is not cheaper if the water were deep enough to run a big ship of war between Sacramento and San Francisco, is it not cheaper to use light draught boats with barges, for the carrying of freight than it would be to use steamers like the Senator or New World?

A. Well, it depends on the depth of water at the head of navigation.

2. I am supposing that you have got depth enough to float a 74-gun ship?

A. Clear up to the head of navigation?

2. What did I ask you? Did you understand the question?

A. I understand the question if the water is deep, from San Francisco to the head of navigation, if light-draught boats -

Q. Did I ask you to the head of navigation or to Sacramento?

A. That is what I understood you to say

Q. (Question repeated)

A. As far as between Sacramento and San Francisco, it would be cheaper to run deep draught boats, where there is plenty of water

Q. Do you know whether or not elsewhere than in California, they have changed from heavy draught boats to these light-draught boats, with barges? A. I do not know anything about outside of California

Q. Nothing about it elsewhere. At the time when this change was made from heavy draught boats to light draught boats in (87), how was the passenger travel between this city and San Francisco, by rail or by water?

A. Both. It went by the cheapest route

Q Is it not true that nine tenths of the passenger traffic between this City and San Francisco has been by rail since the time when the California Pacific came to this City?

Mr. Hart We will admit that as true if it is material

A All the travel principally went by rail

Q Is it not also true that the rates of freight after the introduction and upon the introduction of these light draft boats with barges became, and has since continued to be very much less than it ever was before between this City and San Francisco?

A Under certain conditions

Q Is not the freight cheaper this year 1881 than it was in 1866?

A From competition it is

Q Well as a matter of fact it is not. A By competition

Q Well is it a fact?

Answers sir

Q Is the freight cheaper this year than it was in 1875? Answers sir

Q Ordinarily has it been constantly decreasing from 1871 up to the present time? Answers sir

Q You say that in Suisun Bay there has been a good deal of filling, is the depth of the channel in Suisun Bay any less today than it was in 1866 when you first became acquainted with it? Answers

Q How much? A Considerable

Q How much? A 8 or 10 feet

Q Have you ever measured it? A I have sounded it with the lead

Q What depth did you find it? A I used to find four fathoms.

Q That would be 12 feet?
 A No sir 24 feet to five fathoms.

Q Four to five fathoms?
 A Yes sir

Q How much now?

A It would be two or three fathoms

Q From 2 to 3 fathoms?
 That was this current year 1881?
 A Well from 1875 to 1880. I have not been down the river since 1880

Q From 1875 to 1880 it was two or three fathoms?

A That is I have been on the river, I measured it, taking it from 1866 up to that time —

Q <cut> Well from 1866 up to 1875?
 A Or to 1880 somewhere along there. It is filled up more or less all the way along in the channel, what is called the South channel

Q The South Channel?
 A Yes sir

Q In 1866 it was four or five fathoms deep and in 1880 it was 2 or 3 fathoms deep? Ayes sir

Q What were you sound-
ing it for in 1866?

A well in fogs I have
to sound

Q What were you sounding
it for? What objects had
you? A In the fog

Q And the same is true
in 1880? Ayes sir

Q Do you know whether or
not in 1880 you were in
the channel? Ayes sir

Q In the channel? Where
is San Pablo Bay?

A Below Benicue, below
Curquinez Straits

Q How is it there? A It
has filled up

Q How much? A In the
channel that we generally
run the shoal water channel,
it has filled up more or
less I do not know how
much

Q How much? A all the headlands are filled up 8 or 10 feet, between the headlands

Q Is this in the ship channel? A No sir

Q Do you know anything about the head channel, whether that has filled up or not? A No, any more than what tug-boatmen say, that it has filled up

Q You do not know that at all, of yourself?

A I never sounded that channel, I do not run on that channel. I have been in Suisun Bay and San Pablo Bay

Q Do you know anything about the soundings in either of those two bays, either in the San Pablo or Suisun, the government Coast survey soundings?

A I have seen charts years ago

Q Do you know when it

was made? And sir;
I have seen one; I do
not know when it was
made, I could not swear
when it was made, it is
a good while ago now.

Q Was it not as a fact
made last year?

A I do not know. I used
to have an old chart
and I lost it. I do not
know what became of it

Q That was one then that
was made years ago?

A Yes sir

Q As to whether one was
made last year, you do
not know? And sir

Q Is it not true now
that in low water the
navigation of the Feather
River from Fremont to
Marysville is as good
to day as it was in 1849?

Mr Hart I object to that
as not cross examination
Mr Caldwell We asked
nothing about Feather River

in the direct examination
and if anything was said
about it we withdraw any
testimony with respect to
Feather river if it was
gone into. It was not in
response to any question
that we asked.

Mr Sturt We desire to
reserve the right if any
proof is attempted to be made
with respect to any portion
of the river to rebut that,
if Your Honor believes it
to be material, we not
believing it to be material.

< The Reporter reads the
testimony in the direct
examination with respect
to Feather River >

Mr Belcher I shall propose
to confine my questions
strictly to what this Witness
testified, as to the sand,
that is one thing, and
that he was there, as to
the fact that he picked
up there at one time

Mr Hart I withdraw the objection as to that part of it but I want it understood in withdrawing it that it is not to be understood that we are undertaking to determine the source

The Court We will pass on the other questions when they come up. You now withdraw the objection.

Mr Belcher I will withdraw that question for the present and ask another.

The Court Do you insist upon your exception?

Mr Hart No sir I do not wish to take the chances of a reversal

Mr Belcher What is the extent of the filling?

At that time very small.

Q What is the condition of the bar at the mouth of the river what was the depth of water over

it? A well I only went up as a passenger that trip and had no difficulty only one place getting up to Marysville, one bar

Where was that? A D. is in the vicinity of the California ranch Ponce - where near there somewhere near Stock Farm

Mr Start & that is in 1854? Ayes sir

Mr Belcher What boat were you in? A I went up in the forenoon Dana

The Court I remember he said there were two bars in Feather River?

And in the Sacramento River

Mr Start That is between here and the mouth of the Feather. I notify Counsel that I shall insist upon restricting Counsel to the examination of the Feather River in 1854 at the time he went up there so

as to avoid any such thing as an opening up of this whole question.

Mr Belcher Then at that time you being only a passenger if I understand you, you took no notice of the depth of the water at the bar at the mouth of the river ~~not~~ at all until you got up opposite to Stock Farm where you met with some trouble?

A That is where they got aground yes sir

Q Now at that bar was it a sand bar?

A Shal water all over the river across it

Q Was it a sand bar?

A I do not know whether it was a sand bottom or not

Q Shal water — did you run into it and get aground and wait until the water washed the sand away, until you

could go on? And sir;
they tried two or three
different places before
they got over it

Q And finally got
over? A Yes sir.

Q How long a time wait
ing there? A About half
an hour

Q How you know what
the draft of the frigate Dana
was? A Well she drew
22 inches at that time
I should think

Q 22 inches? A Yes
sir pretty heavy

Q That was a light
draft boat? A Not
very light

Q It is not very heavy;
it is not very deep?

A It was considered
a pretty heavy boat for
a light draft boat

Q Well it was a light
draft boat was it?

A Not strictly speaking,
no sir

Q What do you call a light draft boat?

A One that draws about 14 inches of water or 16

Q 14 to 16 inches? A Yes sir

Q And all over that?

A Well 22 inches is considered a pretty heavy draft boat for up river

Q Did you notice at that time whether at that bar opposite or near to Stock Farm there was a sand bar extending across the river? A I noticed it was shoal water clear across a very wide reach a wide spread of the river there, it appeared to be all bar

Q Did it appear to be a bank of sand for a considerable distance?

A No sir

Q Gravelly; was it a gravelly bar

A Somewhat gritty, a little bit of shun in it no

red, no sediment or no
banks of slickens like there
is at the present time

Q. Well, was it sand?

A. Yes Sir Kind of slickens,
a little bit, that is soft mud
and sand principally sand

Q. Principally sand.
Did the river at that time
have the appearance of a
deposit of sand along pretty
nearly the entire course from
Mangsville to its mouth?

A. No Sir.

Q. What was the appearance
of its bottom or bed?

A. It is a wide river a
shallow river and deep
holes, intervening between the
bars

Q. Could you see the bottom?

A. Well you could tell
the depth of the water by look-
ing at it

Q. Could you see the bottom?

A. No Sir

Q. Then you did not know
whether the bottom was of

gravel or sand or something else except when you ran over it or against it, you were checked in your course?

A. I could hear the boat grating on the bottom - sand.

Q. At any other place than the place you speak of, hap barn?

A. That is all.

Q. And you did not know the depth of water or that there was a bar there at all except from the fact that you struck against it?

A. I never had been up the river before.

Q. Well did you know it whether you had been up there before or not, except from that one fact that you grounded there?

A. I know we got aground. I knew it when we were there.

Re-direct Examination
of

Captain Roberts

Mr Stark - You testified this morning in relation to leaving

on the banks of the Sacramento River, between its junction at Greenmont with the Feather River, some point very far up in Colusa County; when did that leveeing become necessary in order to combine the waters during ordinary seasons within the banks of the Sacramento River.

Objected to as leading

Q. I will ask you whether or not it was necessary to build those levees in order to combine the river to its banks?

Objected to because the witness is not shown to be an expert.

The Court - I suppose you can ask him whether it did overflow or not.

Mr Hart - I do not wish to go into that examination

The Court - I will sustain that objection

Mr Hart - I take an exception

Q. State whether or not the river overflowed during or -

diary high water on the banks of the Sacramento River at and about the town of Colusa from the year 1852 up to and until the year 1862?

A. I was not up to Colusa until 1862

Q. You were not up there until 1862?

A. No Sir not at Colusa.

Q. When did they first commence constructing levees

A. I think it was along in 1871 and '72 somewhere along up there in that vicinity, of 1871 or 1872.

Q. State whether or not before that time they were in the habit of burning the lands along the banks of the Sacramento River

A. Yes Sir

Q. From its junction up or from Knights Landing up

A. Yes Sir

Q. State about how often they did succeed in burning those lands without levees?

A. Better before than than

Since

Q. How often though?

A. More or less every year they could raise a crop.

Q. How long did that continue to be so, that they could farm those lands along the river without levees?

A. Up to the time they commenced leveeing.

Q. When did they commence leveeing? A. About 1871 or 1872 in Calusa County.

Q. Why could not they farm the lands without leveeing afterwards?

A. Because it was subject to breaking out at any point, the weakest point, and sweeping away their ground and demoralizing their farms and levees.

Q. It could not break out if they did not have levees there?

A. No sir.

Q. Why could not they farm there without levees afterwards, after 1871 or '72?

A. Well because the water would go through the breaks.

and bill up behind.

Q. Why did it do that more than it had formerly?

Mr Belcher - He has not said that it did.

Mr Hart - Why did the waters rise higher after that time, or why was it more difficult to farm after that time than before?

A. Because the original banks of turf had been torn up and gullied out and washed out.

Q. Well was there anything below that raised the water back up into Calusa County? A. Yes Sir.

Q. Well what was it?

Objected to as leading.

A. The billing up of the river below.

Q. At what point?

A. From Greenmont down.

Q. How much higher did it raise after 1871 than prior to that time? A. Well it raised the water between Knights Landing and Greenmont five or six feet.

Q. Raised the water that much higher? A. Yes Sir.

Q. And as a consequence what did the people have to do?

A. Build levees^c

Q. What was that necessary for, A. To keep the water from running over the ground

Q. Do you know what the nature of the billing up of the Sacramento River was, immediately below the mouth of the Feather

A. Sand and slickens

Q. And how far down did that billing up extend

A. Clear down to Sacramento and below

Q. You have been asked in relation to two basins, one on either side of the Sacramento River, one in Sutter County and one in Colusa County, extending down through Yuba County, has the leveeing of the rivers made any difference in the amount of water which those two basins carry during each winter? A. No sir

Q. It has not A. No sir

Q. Where does the water come

know that goes into those tide basins

Q. It breaks through the levees,

Q. It breaks the levees?

A. Yes Sir

Q. Through breaks in the levees you mean

A. Yes Sir

Q. Well now that being true is there any more water running through the Sacramento River above its junction with the Feather than there was before the levees were built there?

A. Not after the levees were broken

Q. Well have you ever seen a season when they were not broken

A. Well just when they are new, when the first raise comes, they stand a little while and then break

Q. When the water goes down in its usual way?

A. Yes Sir

2. Then the water goes down
in its usual way? A Yes.

2 What is the color of the
Sacramento River and the char-
acter of its water above its
junction with the Feather?

A Clear

2 You have spoken of Parker
Dam. How long has it been
since that dam was in ex-
istence? A. I should think
five or six years

2. Have there been any dam
there since that?

A I do not know. I have
never been out there to know
what is going on; that is
since that time

2 You said the river is
deeper near Siletton, the
Old River, than it used to be
A Yes.

2 What is the reason of that?

A It is the narrowing up
of the stream on the point
side

2. Does the filling up of
Steamboat Slough have any-

thing to do with that?

Mr. Belcher We object to these leading questions

Mr. Hart. Go on and state what it is. That is what the reason that it is deeper in Old River than it used to be in low water.

Mr. Belcher You withdraw the other question do you?

Mr. Hart. Yes

Mr. Belcher I wish then you would omit suggesting first

Witness You ask the reason why it is deeper in Old River than it was formerly?

Mr. Hart. Yes.

A. On account of the narrowing of the Channel and the filling up of the point said; cut out more

2 What is this point - you say at Isleton or near Isleton - that you speak of?

A It is in the bend. The water in the bend, follows the bend and strikes the head

of the island. It is deeper than it used to be on account of the narrowing of the river.

Q Is that through any considerable extent of the river?

A No. At one place

Q Deepening the water in spots. Does that keep navigation any?

A Only just at that locality. That is all.

Q You can get a boat into the deep hole?

A Yes.

It acts like a wing-dam.

Q What do you mean by the lower Sycamore in Yolo County?

A It is the outlet of the basin above Knights Landing on the Yolo side, the drainage outlet.

Q The drainage to that basin?

A Yes.

Q Has it any connection with the Upper Sycamore?

A Only in name I think is all.

Q Where does the Upper Syc-

- a more run?

A. It empties into Mormon Basin

Q. Where does lower Sycamore Empty? A. Into the Sacramento River

Q. It empties from the basin into the Sacramento River?

A. Yes.

Q. At the time you saw the beak in the levee there, you were speaking of, which way was the water running

A. The beak where?

Q. At the Lower Sycamore?

A. It was running into the Sacramento

Q. Mr. Belcher has examined you as to whether the water was higher in 1862 or in 1868 at this point. When did you say it was higher?

A. Right here in the immediate vicinity of the City it was higher in 1868 I should think

Q. What do you mean by higher? A. Well, right in

front of the City
 Q In the river?

A Right in between here and
 Washington.

Q In the river? A Yes
 Q State whether or not it
 was as much higher at its
 top as its bed was higher at
 its bottom, than it was in
 1862? A Well, in high
 water, the river sometimes fills
 up and makes a bar, and
 will fill right up in one night
 clean to the top of the water,
 the high water, the highest water.
 It is very irregular about that
 and I can not tell

Q You can not tell whether
 the bed is six feet deep or
 not? A No. I have
 known it to fill up above
 the bridge here in high water
 in one night, and the Gov.
 Dams ran aground one night
 in the middle of the river

Q Where was that?

A Above the bridge.

Q Near the mouth of the

American River?

A That was right opposite the Gas works there, where the old Gas works used to be

Q Right below the American?

A Yes.

Q How high was the water at that time? A High water, big high water

Q Where was it that the Gov. Dana ran around or ran ashore? A Right in front of the bridge, right up about 400 yards or 300 yards S.

Q How far from the center of the stream?

A Right plumb in the middle right opposite the draw.

Q How deep was the water at that time after it was filled up? A. It was just a high hummock like of sand came up in the river, and then it washed away again in a day or two?

Q Can you tell where it came from? A No.

Q Did you ever see that

occur at any other time?

A Yes.

Q When? A Oh! At different places in the river

Q Did you ever see it occur at the mouth of the American Mr. Belcher We object to that question as suggestive Mr Hart. I am trying to confine the witness to a locality and I have a right to do that

The Court. Is the same locality Mr Hart. Yes sir. At the mouth of the American River did you ever see that occur? A I have seen it just below the mouth fill up

Q During high water times?

A Yes.

Q How long did it take it to fill up at these other times? A Sometimes it would fill up in a night?

Q Could you tell where the sand was coming from A Well the water would

becoming right out of the American, and it would be right in the Eddy. I could not tell where it was coming from but I suppose from the American River.

Q You say the water was coming from the American?
A Yes.

Q. Would it be on the inside or the outside of the water coming from the American?

A Below; on the inside.

Q When was it you saw the Gos. Dana dam on a sand bar there at high water time?
A I think in 1868.

Q Can you always pass the mouth of the American River during high water times?

A Not safely.

Q How often have you seen it when you could not pass it safely?
A Oh! several times.

Q What time in the flood does that occur?

A After the first big rain that comes down the Amer-

clear. It shoots across the Sacramento

Q What is the reason you can not pass generally?

A Well, coming down it will shoot a boat into the bank.

Q What? A It would be apt to shoot a boat and bayle into the bank - the cross current

Q Do you mean the water?

A Yes

Q The operation of the water?

A Yes

Q Have you ever seen it when any other cause prevented you from crossing the current of the American? A No, not at that place

Q Not at what place?

A At the American when it comes into the Sacramento

"

Re Cross Examination
of
J. N. Roberts

Mr Belcher Captain, you were asked if it became necessary at Colusa to build levees by reason of the filling up of the River below, Did you mean to say that it was?

A. Yes. That is the tendency of the River filling up below. That is what I meant.

Q Did you mean to say that the water of the Sacramento by reason of the filling at the mouth of the Feather sets back to Colusa?

A. No Sir, It would not set back to Colusa.

Q Does it set back more than six miles?

A. It sets back as far as Knights Landing

Q Does it set back more than six miles?

A. Yes

Q How much? A. It sets

back to about four miles
above Knights Landing

Q About four miles above
Knights Landing? A Yes.

Q And how far above that
is Colusa? A. By water you
mean?

Q By Water? A. It is about
in the neighborhood of fifty
miles

Q Is it not true that the
difficulty in farming along
the banks of the Sacramento
River and particularly on the
West bank is to be attributed
to the building of levees along
the bank. Is not that the
fact? A. Well some places
are destroyed, yes.

Q. From a point six miles
above Knights Landing is not
that the only thing that has
damaged the farming along
the banks of the Sacramento
River since you first knew it?

A. From Sacramento up?

Q From a point six miles
above Knights Landing up

the River so far as you have been I ask you if it is not the levees alone that have caused all the change in the character of the cultivation and all the damage that has been done to agriculture or cultivation along the banks of the River? A. No sir.

Q What else? A. It is the obstruction of the water course below and the damming up of the sloughs.

Q The damming up of the sloughs? A. Yes.

Q Is not that leveeing, is that a part of the system of leveeing the damming up of these sloughs along the west bank of the River from Knights Landing up to Jacinto? A. Yes.

Q Then when I speak of leveeing I include the whole. I ask you if there has been any other cause of the injury of cultivation along the banks of the Sacramento River from a point six miles above

Knights Landing as far up the River as you have been except the fact of leveeing along its banks ?

A. Only I should judge except where it backs the water up. That is all

Mr Hart That is a matter of opinion ? A. Yes.

Mr Hart I submit that he is not competent to give an opinion.

Mr Belcher. Mr Reporter will you read my question to the witness

The Reporter (Reading) I ask you if there has been any other Cause of the injury to Cultivation along the banks of the Sacramento River from a point six miles above Knights Landing as far up the River as far as you have been except the fact of leveeing along its banks.

Mr Belcher Is there any other Cause than the leveeing ?

A. Yes.

Q What is it ?

A. The filling up of the Channel
 Q Has the Channel of the Sacramento River filled up at Colusa or below Colusa at all, until you come down say within eight miles - I will increase the distance within eight miles of Knights Landing } A. I do not know that it is filled up until we get below Knights Landing a little ways.

Q I am asking you about a particular stretch of the River from a point eight miles above Knights Landing up to Colusa, Is there any filling } A. No sir not much.

Q Then is there any cause from that point up to Colusa for injury to Cultivation on the banks other than the building of levees and the stopping up of the sloughs } A. Yes

Q What is it } A It is the outlet from Fremont down

Q. How does that effect it?

A. It has filled up and backed the water and there is not so much Capacity to carry the water off as there was

Q. Is the River any less at Colusa today than it was in 1854 ? A. No sir

Q. Is the River at the Orchard Or what used to be the old Toe Orchard on Grand Island Is it any less there today than it was in 1854 ?

A. The water does not run off so fast.

Q. Is the River any less there than it was in 1854 ?

The Court. You mean that it does not run off from the basin

A. No sir it does not run off

Mr W. C. Belcher Is the current any less at that point than it has been heretofore ?

A. No sir.

Q The River there is of the same width and the same depth and it has the same current this year that it had

in 1854 } A. Yes

Q Now has that Orchard been destroyed } A. Yes

Q. What has destroyed it?

A. Back water

Q Back water from what

A. From what run over the levees

Q Is it not true that that Orchard was chiefly destroyed by seepage water seeping out from the River } A. No sir

not that I know of. I do not know of it. I should judge it was the back water

Q Have you seen when you were going along pass that Orchard the water bubbling up from the ground at a distance of two, three, and sometimes four rods from the levee and running off back into the tule in a considerable stream } A. I have seen it running through the levee at breaks

Q Have you seen it seeping through, bubbling up and

Running off where it seeped through the banks, I have seen it going through the gopher holes.

Q Through the gopher holes?

A. Yes.

Q Is that an answer to the question that I asked you

A. No sir, I do not know as I saw any seepage water running over

Q Is it not a fact that at that point the water is four or five feet higher against the levee than it was before there were any levees built there? A. Yes

Q Before the levee was built there and until the high water overflowed the banks?

A. It overflowed and run off quick.

Q How high over the bank did it overflow, how deep

A. Four to six inches and sometimes it might be a foot.

Q Where did you ever see it either four inches or overflowing

is at all at that point ?

A. Well the high water of 1862 when I was up the river
Q In 1861 and 2 it overflowed there. } A. Yes.

Q Did it overflow there again in 1868 ? A. If I recollect right they had a small levee there that kept it out }

Q. How high ? A. It might have been two feet

Q Did the water come over that levee two feet high that winter

A. No sir nor there. But at a great many other places nor levees, it run over

Q. I am talking of that place
A That is the only place I think that it did not run over.

Q. During any winter since 1872 since the building of the levee from Knights Landing up the head of the Island have you ever at any winter since that time seen the water so low in the River at ^{its} highest water that it would not have

run over the banks if the levee had not been there, has there been any winter when the water has not been more than three feet above the natural bank of the River
 A. Well there have been some exceptions yes some winters
 Q. What winters? A. A year ago this last winter, at Bullocks Point - I had some wheat there
 Q. (Interrupting) I am talking about that orchard, Has there been any other winter when the water would not have run over the banks if the levee had not been there, three feet?

A. I think it would not get up three feet there a year ago this last winter

Q. There was not water enough?

A. No sir

Q. Has there been any other winter than that since 1872

A. Yes.

Q. What? A. There has been other winters yes. since 1872

Q. What? A. Well I cannot

Remember exactly, I think in 1868 we had pretty high water.
 Q. High water. I am asking you whether there has been any winter since 1872 when the water came up against the levee built in front of that orchard place more than three feet or at least three feet above the natural bank of the River ?

A. Yes I think there have been some seasons since that, it has been higher than that

Q Where it has been higher than that ? A I think so.

Q. Where it has been five feet

A. Yes.

Q And perhaps even higher than that, but has there ever been any winter when it has not been that high,

A. I think 1873 was not a very high water year. It may not have been a high as three feet at that place

Q Now is it not then true that if there were no levee from that Orchard up to Colusa today

On either side of the River and the sloughs were open as they were prior to the building of any levees that farming along there would be just the same today that it was then?

A No sir.

Q Why not? A. The River has filled up so much below

Q Does that water set back up that far? A. It deadens the Current

Q Is the Current any less at the Orchard today than it was in 1849? A. I was not there in 1849.

Q Well when you were there have you ever seen it say in 1866 or in 1854 any greater than it is, or was last winter A. The Current is less in low water.

Q. I am talking now about high water? A. I was not up there in 1854

Q, Or in any year when you knew it has it been greater at the same stage of water from

what it was in 1881 at the Orchard, Has there been any change at that point in high water? A. In high water there has been no difference that I could perceive.

Q Can you perceive any difference in low water?

A. Yes.

Q At that point? A. Yes.

Q Now is it not true that below that point there is several rapids now.

Mr Hart Several rapids below what,? below the orchard

Mr H. E. Belcher Yes.

A. No sir, no rapids

Q Is not there considerable fall and a considerable current below that point? A. There is not as there used to be in low water

Q. Not as much as there used to be in low water? A. No sir

Q. Not as much current?

A. Not as much of late years as there used to be in former years at low water.

Q So you say that is so at

Colusa } A. No sir it is perceptible, from I should judge from near the peach Orchard Clear down to Fremont.

Q Well above the peach Orchard A. It is not so perceptible.

Q. Is it perceptible at all?

A. Somewhat yes.

Q. How far up? A. Well I should judge up to the vicinity of Eddys Landing.

Q. To the vicinity of Eddys Landing A. Yes.

Q. You say it is perceptible to Eddys Landing? A. Yes Eddys Landing yes. You get shoaler water above them.

Q. Well from that point up I want to know what it is.

From Eddys Landing up what has been the injury to cultivation on the banks of the River if anything? A. I do not know as there has been anything in particular. Where the levee breaks it tears up the soil that has been plowed up and it washes it away

Q Was there ever any Cultivation
from Knights Landing up for
five miles up the River on the
west bank } A. Not much on
the West bank.

Q Was there any } A. Very little

Q Was there any } A. Yes some

Q Where } A At the Starr
Rancher there was a little bit,
a little patch, a few acres of
garden.

Q When was that abandoned

A. In the last five or six years

Q Has it been more than that,

Has it not been ten years }

A I have not noticed it to say

Q Has it not been more than
ten years since there has been

a spade put in the ground
there, } A. No sir. Some seasons

Crops have been put in right
at Knights Landing. They put

one in at Knights Landing not
long ago they just happened to

Catch the right season and they
did not get flooded out

Q On the bank of the River }

A Yes.

I Was the Parks dam Cur because the people were afraid it would back the water up.

Mr Hart Objected to the question and it was withdrawn.

Redirect Examination
of
Exp. J. H. Roberts

Mr Hart Now in your Recross Examination I understood you to say that the extent to which the water was backed up by the obstruction ⁱⁿ of the River just below its Junction with the Feather River ~~was~~ ^{was} to six miles above Knights Landing.

Mr W. C. Belcher Objected to the question upon the ground that it was not in Redirect Examination and that it was not proper for them to repeat to the witness what he has stated.

I State whether or not the River banks being leveed up to ~~a~~ ^{the} points to which the water was backed up there was any place where these.

levees could be stopped without inundating the lands immediately above

Mr H E Belcher objected to the question upon the grounds that it is not redirect examination and that is simply a repetition of what he went over in his direct examination and the question is leading.

Mr Hart I propose to prove that the leveeing of the River to the extent to which it became necessary on account of these deposits in the stream rendered it necessary to levee it further up above that, That that levee commenced operating as an obstruction, and the system was carried above the town of Colusa The Court It seems to me that that is simply a matter of argument.

Testimony
 of
 Captain Eros Fouratt
 Called for the Plaintiff and sworn
 Mr Cadwalader You are now^{the}
 Captain of the Modoc are you
 A. Yes

Q Plying on the River between
 here and San Francisco.

A. Yes

Q When did you first become
 acquainted with the Sacramento
 River A. The Sixth of
 April 1850.

Q What has been your
 relation to it ever since.

A. I have been almost
 continuously on it - I
 have been on it ever
 since - I am a little
 troubled on account
 of the loss of my teeth
 and I cannot talk
 very well now.

Q On what kind of
 craft A. On Schooners
 and Steamers

Q What was the first

Steamer you were on -
 A The first Steamer I
 came up on was the
 McKim a propeller
 Q You were the pilot
 of the McKim A. Yes.
 on her first trip up

Q What was she -

A She was a sea going
 vessel, before she came
 on the River

Q How long did you
 remain upon her as a
 pilot A I only made
 I think three trips on her
 if I recollect right.

Q What was the next
 Steamer A The next
 Steamer I came upon
 was the Goat Hunter

Q What was she ?

A. A sea going vessel

Q What was the next
 one A The next one
 was the West Point

Q What was the next
 Boat A The next
 Boat to the West Point

that I went on was the Wilson G. Hunt

Q What was the next one A The Confidence

Q What was the next one A The next one was the Comanche

Q What was the next one A The Bragdon

Q What was the next one A The Eclipse

Q What was the next one A The New World -

Q What was the next A The next was the Yosemite -

Q What was the next A The Capital -

Q What Kind of Steamers were they from the Hunt down to and including the Capital A Well the Hunt was a little Boat

Q What were they A I think she came around the Horn from New York. She drew about two

Hundred tons that was her measure

Q What was the tonnage of the Capital A About Sixteen hundred tons.

Q When did she cease to run to Sacramento

A I think she ran in 1872 & 1873 -

Q What was the next Boat that you were on after the Capital -

A The next boat I was on after the Capital was the Julia

Q How did she compare in size with the Capital

A Well the Julia was about two hundred tons, Two hundred or three hundred tons

Q When did you commence running on the Julia. A I commenced running on the Julia in 1873 & 1874 I think

Q In what capacity, as Captain A Captain and

Pilot.

Q What was the next one A The Cora

Q In what capacity A as Captain & Pilot

Q What was her size, her tonnage A About one hundred and fifty tons

Q What was the next one

A The next one - I came down to the Steamer Enterprise

Q What kind of a Steamer was that A A Stern wheel boat.

Q In what capacity on her were you A Captain and Pilot

Q What is the next one A The Modoc

Q What relation do you bear to her A Captain & Pilot

Q What is she A a Stern wheel boat

Q What is her tonnage

A About Two hundred and sixty by measurement

Q Are you not the

Oldest pilot on the River
 Q Well I expect I am
 Q Now Captain tell us
 when there first occurred
 any material impairment
 in the navigation of the
 Sacramento between
 Sacramento and the mouth
 of the River - A On our
 Steamers?

Q Yes A Well we had
 some little impediment
 from the start on Hogs
 Back

Q Well say Excepting
 Hogs Back A Excepting
 at Hogs Back about 1866,
 along there we began
 to feel Haycocks Shoals
 I think

Q In 1866 A Yes in
 a low stage of water

Q Was that confined
 to Haycocks Shoals A That
 was the only Shoal that
 we had to amount to any
 thing up to 1866

Q Up to that time

What Kind of Cargos, has
the boats been carrying -
A To Sacramento

Q Yes. A Well they
were carrying up here
about two hundred or
three hundred tons -

Q What has occurred
at Haycocks Shoals
since 1866 A There has
been a gradual filling
up there

Q How has it been in
the balance of the River,
when did you first
notice any substantial
impairment of the remainder
of the River excepting Hogs
Back and Haycocks Shoals

A Well I have noticed
a filling up of the River
but not to be detrimental -

Q I mean an impairment
to navigation.

Objected to, Question withdrawn

Q When did you notice
any substantial impairment
to the navigation - A

Mr. Belcher I object to that Question upon the ground that it is leading -

The Court Has the navigation been impaired in other places since then and if so when and where

Mr Cadwalader. Has the navigation been impaired in other places since then if so where a since 1866?

Q Yes. A At different places along the River. Sacramento - Sacramento bend -

Q What changes have taken place in the bed of the River since say 1866. A, It has constantly been filling up

Q How A Filling up on the bottom and the sides and narrowing the River in -

Q To what extent -

A Since 1866?

Q Yes. A I suppose since 1866 up to the

present time it has filled up six or seven feet

Q How much has the Channel of the River been narrowed or the Bed of the River been narrowed

A Well it is about a third of the River

Q A Third of the River

A Yes -

Q What has it been filled up with A Well we call it sand -

Q In what part of the River from Sacramento down does this filling up extend - A Well

Clear through to San Francisco

Q Clear through to San Francisco A. Yes

Q If the material varies as you go down State how it varies - A The kind of material

Q Yes A Well I think the material as you

get lower down is lighter material than it is up nearer Sacramento.

This material we find up here is Black Sand and further on below it is of a softer nature, sand and mud mixed. Q What is the filling from Rio Vista to the mouth of the River? A From Rio Vista Well at the mouth of the River it has filled in very much and also in portions of the River all the way along.

The wider portions have narrowed in very materially, perhaps a third of the River the Shoals being made about as high as the Banks.

Q What changes have occurred in Susan Bay since the filling commenced there? A It has formed a middle ground there in the middle of

the Bay -

Q What do you call the middle ground a Shoal of Sediment Sand and soft material.

Q How has it changed the appearance of the Bay from what it once was a My first recollection of the Bay is that there was not but one Channel through Suisun Bay and now there are two.

Q Well what is there between them A This Bar or Shoal or Island.

Q How big is this Shoal a On that Island

A Yes A At high water I suppose there is about a foot of water on it, at the highest part.

Q How deep is it, Suppose you had to bore down to the old bottom a Well it stops it very suddenly.

A I could not tell you that I cannot answer that

Q How long is it. A It is about Eight or nine miles long.

Q When did that occur?

A Well it commenced first commenced forming upon the sides, on the South side of Tuscan Bay, the Shoal commenced making from the South side. I think it was about in 1864 to 1866. that the South Channel first commenced to form -

Q How has it grown in late years. A This middle ground

Q Yes A The middle ground has grown all the time

Q How has the deposit in the Sacramento been growing for the last ten years. A It has been growing very fast in the last ten years

Q What would be the effect of a ~~the~~ continuance

of that filling for the next ten years to navigation
Mr Belcher objected to the question upon the ground that it is hypothetical and that the witness has not shown himself to be competent to give his opinion on that subject

The Court: You had better ask him to state the facts

Q State how the deposits are made, are apparently made in the River bed, at what times and where they are first made from Sacramento City down

A The first deposits we notice is during the rise of the first high water

Q What condition then is the River in for purposes of navigation A Well these deposits are formed along the River in the Channel, drifting sandbars as we call them

Q State what you know

about these drifting sand bars
 how long they are of what
 material they are composed
 and how they travel A well
 these sand bars form at the
 first rising of the high
 water, the floods and I
 have known them to be
 from one hundred to
 five hundred yards long
 Q And how wide A Taking
 up nearly the whole width
 of the River

Q At what velocity were
 they travelling A They would
 change in twenty four
 hours from a mile to
 a mile and a half down
 the River

Q And what effect would
 they have on Navigation
 A Well they shoal the
 water where they are and
 we have brought up our Boats
 on these sand bars.

Q How are the Boats brought up.

A By bringing up on these sand bars
 What is the sensation on the Boat

A. Well it stops it very suddenly. I was brought up on it with different boats, The Capital more particularly she was a heavier boat than the others. It threw people down on the deck and threw me nearly out of the pilot house.

Q At what velocity were you running? A. Probably about 18 miles.

Q At what stage of the water? A. About twenty feet.

Q Which way were you going? A. From Sacramento to Sonoma-Cisco.

Q Going down? A. Yes.

Q Where did you say you overtook this bar the one that you say you encountered when you were in the pilot house and that you say nearly threw you out of the pilot house?

A. It was just below Steamboat Slough or what is called —

Q (Interrupting) Is that in the main River?

A. No sir it was in the Slough.

Q Steamboat Slough? A. Yes

Q So those bars re-form as they go down.

Mr W. C. Belche objected to the question as leading and it was withdrawn.

Q Well as the water goes down what do you notice in the way of deposits?

A. I noticed a filling up on the banks and the bars and bars forming on the sides of the river and in the bed of the River at different places.

Q What have you noticed in regard to the amount of sediment or of sand that the water was carrying at the top say in the last ten years?

A. I noticed that it was very muddy but I cannot tell how much it carried.

Q Have you ever seen the sand in the water move? A. Yes

Q In what width of the river, in how large a section of the River?

A. Would this sand move?

Q. How is how you observed it

A. Well I have, when I have been
laying on these sand bars along
the River I have noticed it move
along the sides of the boat

Recess Until
Wednesday Dec 7th
at 9.30 Am

In the Superior Court of
the State of California in
and for the County of Sacramento.

The People of the
State of California

- vs -

The Gold Run Ditch
and Mining Company

Wednesday
Dec 7th 1881.

Morning }
Session }

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Reported by
Winfield H Davis
Official Reporter.

In the Superior Court of the
State of California in and
for the County of Sacramento.

The People of the State of California	}	Wednesday
- vs -		December 7 th 1881
The Gold Run Ditch and Mining Company	}	Morning
		Session.

Testimony
of
Enos Fouratt.

< resumed >

Mr. Cadwalader Q At
what velocity as com-
pared with the current?

A Well the sand that I
saw is very light sand
on top going nearly as
fast as the current

Q Have you ever
found what would be
moving lower down -
what was moving lower
down

down? A. Yes sir

Q. How? A. I have had a steamer sunk down here, so I saw the sand moving in to her

Q. At what rate?

A. Well about 100 tons into the Cora's hold in ⁽²⁾two weeks

Q. Were you on the Cora at the time she sunk in Old river?

A. Yes sir

Q. What position did you hold on her?

A. Captain

Q. How long was she in the water before she was raised - before you got her out?

A. Well something in the neighborhood of a month, I think in a month

Q. What were you doing in that interim?

A. What was I doing? Well so much sand got

on her deck, we had to get hydraulic hose in there to work it off, and with wheelbarrows and shovels, anyway to get it off between decks

Q. Well, I mean, what were you doing towards raising her between the time she was sunk and the time she was up? A. We had timbers across her—

Q. Well what I want to get at is this;—Were you or were you not trying to raise her during that time?

A. Yes sir, all the time or nearly all the time within a day or two of the time

Q. What kind of appliances did they have for that purpose, as compared as with such as are usually used
Mr Belcher What is the

materiality of that?

Mr Cadwalader It goes towards what we call the safety of navigation. What I want to get before the Court is this; That they were provided with what is called approved machinery for that purpose. I will ask you what effect the falling in of this river below here has had upon the time, the speed of boats, both up and down the stream, and if it has impaired it, to what extent - mention the extent?

A. It has diminished the time of the speed of the boats about one third between here and the mouth of the river

2. Is there any difficulty arising in what is called storage way?

A. Oh, yes sir I have

great difficulty in steering our boats when they are near the bottom

2. What have you to say about the size of the boats, that are large enough to be successfully used in the navigation of the river?

A. I should think the Madoc and the Apache, were quite as large as could be successfully navigated on this river now

2. At low water?

A. Yes sir

2. What is the length of those boats - they are the same size are they not?

A. 200 feet

2. What is their width?

A. Fifty feet - a little over 50 feet

2. What would they ^{draw} ~~draw~~ loaded and light?

A. They trim on 3 feet

2. Has your attention

being called to the filling
of Steamboat Slough?

A. Yes sir

2. State when it occurred
how deep the fill is, and
from what cause, or
state whether that was
the usual line of the
travel of heavy boats?

A. They always run
through there until with-
in 4 years ago

2. Until four years ago?

A. Yes sir.

2. Well, now, how much
has it filled up,? what
part of it and from what
cause?

A. Well, it is
filled up all the way
through. Of course I only
know from the fact of
my last trip through
there. That was on the
Steamer Cora. I brought
up there just below
what we call Steam-
boat Slough, and then
comes the continuation

of 2 sloughs, which we call Hurritts' Slough, from there out into Cache Slough. We brought up there and that was my last trip. I had hard work to work her through the sand through there, that trip.

Q. When was that? A. I think it was about 4 years ago.

Q. How much water did your boat draw?

A. She was drawing $5\frac{1}{2}$ feet. We had a little raise in the river at the same time.

Q. Since then, I suppose Old River has been used as a channel? A. Yes sir.

Q. Did you state how much the fill in Steamboat Slough was? A. Where I was brought up it must be 10 feet.

Q. Did such boats as the Chrysolis and Capitol pass through Steamboat Slough in low stages of water?

A. Yes sir.

Q If you know state what effect clear water or comparatively clear water has upon this character of the material lodged in the bed of the Sacramento

A It has. It cuts it away. It cuts it out, deepens it and also cuts away the bars and widens it

Q What has been the condition of the water in the Sacramento this year, say after the first of June as compared with the waters of say 1880 - 1879 and 1878? A Well it is as clear as I ever saw it, since I saw it when it was clear water, and cut away the bars we noticed it in a bar here just below Sacramento bend between here and Sutterville.

Q Whereabouts? A. Well it commences to make nearly opposite Merkley's.

Q Do you know this fog map?
A. Yes sir I have seen it

Q. You see R. J. Merkley on the map where was that bar
A. That bar formed here (referring)

Q On the other side opposite Merkley's — those dark lines there shows it

Q. Now when was that bar formed and when was it cut away? A. That bar has been forming probably for about four years there at that point and last year or this last summer it cut away.

Q This present summer

A. Yes sir

Q Now what do you attribute that to? A. I attribute it to the water being clear I think if the water had not got clear it would have deposited on that bar and filled up as it did before heretofore.

Q How much of the River bed was that bar occupying before the clear water attacked it, before the water

A. About one third of it about one third of it

Q How much of the length of the River that is up and down the stream } A. Well nearly half a mile I should think

Q What would be the effect upon this deposit in the River Channels of two or three clear years of clear water such as we have had in the River since the first of June this year in regard to restoring it or not restoring it to the condition that it was in prior to 1865 or 66

Mr Belcher I object to that first that this witness has not shown himself to be an expert second that the question is leading

Mr Badwallader we make this averment in our Complaint and we propose to prove it by this

Witness who is a navigator,
 In regard to this matter being
 leading I will observe that
The Court The final Conclusion
 which the Court is to draw is
 never to be left to experts in
 any case whatever.

Mr Cadwallader I draw a dis-
 tinction between a practical
 navigator and an expert.

The Court Let him detail what
 he observed and his final Con-
 clusion as to whether navigation
 is obstructed, or to what extent,
 I suppose the Court will have
 to withdraw from the other
 testimony.

Mr Cadwallader What if any
 other instances of any other
 have you noticed of the operation
 of Clear Water or Comparatively
 Clear Water upon the deposits in
 the River Channel?

A. Well every summer when the
 water gets clear - In low stages
 of water the water gets clear al-
 ways - Clearer than usual and
 then it begins to cut in the

bed of the river and we find
her Channel here distinct and
getting better all the through
the low water

Q What has been to what
extent has that been your
observation } A. Up and down
the river.

Q Yes sir } A. Well I have
noticed it from the time we
come in on Cache Creek until
we arrived at Sacramento

Q A good deal has been said
about a bar called the hogs
back. do you know what caused
that } A. No sir. I know the
hogs back is there but I
cannot tell what caused it

Q Do you know whether it is
natural or artificial impediment
to navigation

A. It is a natural bar.

Q Did you ever see any
remains of a sea going hulk

A. I saw her when she sunk
there.


Q Did she sink across the
Channel =

objected to as leading -

Q State who^r ^{vessel} formation it was where she sunk and when she sunk o } A. I cannot recollect the name of her.

Mr Belcher I object to that as Mr Material.

The Witness I think she was a bark loaded with material machinery going from Sacramento to San Francisco. She was drifting down with the current I was on the steamer Bragdon at that time and had orders from the company to take that bark in tow on my return trip to San Francisco and when I got there she was sunk but not in the Channel, rather on the west side of the Channel
Q How did she sink across the stream } A. She laid nearly across the stream yes Sir



Q How long was she?

A I should judge she was 125 feet, about 100 feet somewhere. She was small

Q How high was she? about of water?

Q What was her depth? a From her depth to her keelson?

Q Yes sir? A About 20 - 22 - or 23 feet I should think

Q Does she lie there yes? A She lies there under the sand

Q How near is that to what is called the Stog's Back Shoals?

A That is right on the West side of that shoal. Stog's Back shoal lies all the way across the river

Q I ask you whether she contributed to the formation of that shoal there?
A No sir

Q It did not? A No sir

Q I was told last night by a gentleman that it did

The Court one of your witnesses said that originally it was hard pan that shoul, and had been filled in with sand since a certain date

Mr. Leadwala asks what things have been done in the river to produce an amelioration of navigation - what improvements? A A wing dam on the Stags Beach and one on Staycock's shoals

Q I will ask you what you know in regard to the lumber schooners between the Humboldt Country and Sacramento? A Well there was a great deal of lumber coming from that section of the country that comes up the river

Q How was it carried on

pay prior to 1875?

Q On Schooners, carried up to Sacramento on schooners

Where? A Well they came from San Francisco

Q Now state how many schooners were engaged in that business pay up to 1875?

A Well I should judge there were — I have seen six schooners on the river at one time loaded with lumber for Sacramento

Q What kind of lumber would they bring principally?

A Red wood lumber

Q How is that business now carried on?

A Mostly by barges.

Q What is the difference in the class of schooners navigating the river now and those engaged in that lumber trade in the Humboldt region?

A In the draft of water?

Q Yes and of tonnage?

A There is a big difference in the draft of a barge and of a schooner, probably as much as four feet difference in favor of the schooner being heavier draft

Q Well I mean what is the difference in the class of schooners now running to the City and those that were engaged in this Humboldt trade?

A Well those engaged in outside trade could not get up here at all

Q They could not get up here at all? What are the largest schooners now running to this City?

A The Sacramento and the Staskins

Q Where is the lumber transhipped? A To

San Francisco

Q What is the size of the Staskins?

A Well I think the

Haskins will carry 200 tons. She is a steam schooner and so is the Sacramento.

Q How many schooners are running now?

A Only those two schooners now to Sacramento.

Q How much do these steam schooners draw? How much water? A I think they draw about 5 feet of water $5\frac{1}{2}$ probably.

Q The schooners are running now? A Yes sir. There is one of them on here way up here now loaded with lumber.

Q How much is that, light or loaded?

A $5\frac{1}{2}$ feet — loaded.

Q How much light?

A Well I guess they do not draw over 3 feet — about three feet.

Cross Examination of Enos Fouratt

Mr Belter. Q Had you had any experience on the water prior to coming to California as a sailor or pilot? A Yes sir.

Q Where? A On the Hudson River and the Raritan River.

Q As a pilot? A Yes sir.

Q And when you came to California what year was it? A I arrived in California in 1850.

Q Did you go immediately to service on the river?

A Yes sir.

Q And have continued on the river ever since?

A Yes within a short time probably six months altogether I have been off the river.

Q Have you ever been up the river? A I have been

up to Marysville. I ran
to Marysville on the
steamer Bragdon. I think
it was in the winter
of 1853-4

Q Had you ever been
up the Sacramento except
on the trips to Marysville
A Yes sir I have been
up on a pleasure trip
there once to Red Bluff

Q How recently?

A That was 13 years ago

Q Did you say you
had been pilot on
schooners coming up the
river? A I sailed a
schooner on the river for
a short time in 1850

Q What was her name?

A The Chesapeake.

Q At what portion of
the year? A I think
I commenced on her on the
6th of April 1850

Q And continued her
long? A Well I was on
and off of her for two months

I did not stay by her all the time. I bought her after being in her two trips

Q April and May? A Yes

Q What was the tonnage of the Mellem? A I cannot recollect just the tonnage of the Mellem. She was a large steamer

Q Do you know her draft?

A I know the draft the first trip she came up I know the draft of her water the first trip she came up when I came up on her as pilot

Q What was it?

A She drew $8\frac{1}{2}$ feet of water

Q What time in the year did she come up?

A I think that was in May

Q 1850? A Yes

Q What was the tonnage of the Gold Hunter?

A She was about 250

tons I cannot tell with regard to that. I think she was about 250 tons

Q You have spoken of some of them, and among them of the fold Hunter as being sea going ships. What did you mean by that?

A Well the fold Hunter after making a few trips up here went to Australia and was running on the Coast. Those I call sea going ships

Q She was intended then, for a coast steamer? Ayes.

Q A small coast steamer? Ayes.

Q The New World was built for a river steamer was she not? Ayes.

Q So with the exception of about three of these vessels you have named - the Mellem, fold Hunter

and perhaps one other -
all of those vessels were
built for river navigation
all except those I
believe - yes.

Q You have spoken of
the Enterprise? How
large a boat was she?
A She was about 125
tons.

Q Where did she run?
A Where has she been
running?

Q Where when you
were in her was she run-
ning? A Running from
here to San Francisco

Q When was it that
you were Captain of
the Enterprise?

A I was Captain in
here about four months
ago

Q Was that the first time?

A No. I had been on her
several times previous to
that

Q When first

A About three years ago.

Q How long has the Enterprise been running on the river? A She has been running off and on, on the river between eight or ten years.

Q How long the Flora? How long has the Flora been on the river?

Answer I cannot recollect much about her. I do not know. I have seen her here but I cannot tell how long she has been running on the river.

Q It is considerably more than 10 years is it not? A Well possibly.

Q How long the Julia? A She Julia has been running I guess about 15 years, 15 or 16 years.

Q Now is it not true that from some early day - say 1854 or '55 or '56 - with the exception of the

passenger boats between
this city and San Fran-
cisco the freight was
carried upon light boats,
boats of light draft,
and I do not know that
it was.

Q Was there ever to your
knowledge any heavy
draft boat used for the
carrying of freight exclusively?
here? Yes

A What? A The Capital

Q The Capital? A And
the Senator

Q Was the Senator
exclusively a freight
boat even? A She carried
all the freight she could
get, all that offered on
that day that she came.

Q Was she intended
for passengers? A At
the same time - yes.

Q Do you understand
what exclusively means

A Yes she was not
exclusively for passengers

Q What does exclusively mean then? A She was not exclusively for passengers; she was for passengers and freight.

Q When did you answer the question I asked you? A I might have misunderstood it.

Q Did you misunderstand it? A Yes.

Q You did not understand the question then as it was asked you. Now I will ask you again the same question, repeat it in regard to the Senator.

<The question is read by the reporter as follows:>

Q Was the Senator exclusively a freight boat?
Mr Belcher Q What do you say?

A No.

Q Or was the Capital?
A No.

Q When did the Senator also continue making trips

up the river? A I cannot
recollect

Q Not even approximately
Ans.

Q Did she ever run
up the river more than
one Season? A Yes

Q When did she begin?

A Before I arrived in
the Country

Q When did she cease
making trips up
the river? A I think 1871
Oh well it was about 1871

Q What Company owned
the Capital at the
time she ceased making
trips? A The California
Pacific Rail Road Company
owned her

Q Did she cease
making trips up the river
at the time or about the
time that the California
Pacific Railroad came
into Sacramento?

A I think she ran about
a year after the California

Pacific Railroad came in
 O being owned by that
 Company all the time?
 Ans. That was before
 they bought them out.

Q Did she stop making
 trips on the river and
 did all those boats
 which had been used
 prior to that time for
 the carrying of passengers
 cease making trips up
 the river when California
 Pacific Rail Road Com-
 pany bought them and
 controlled them?

A Those large boats
 did. They continued the
 smaller boats

Q Did they not stop
 for that reason? because
 they were controlled by
 the railroad Company
 and they preferred to carry
 the passengers by rail.

A I suspect that was it

Q Do you not know that
 was it? Ans

Q Is it not also true that about that time 1871- the system of carrying freight with light draft steamers and barges became pretty general in this river between here and San Francisco and in the Bay of San Francisco?

A There were wheat barges towed by light draft steamers.

Q How was that?

A There were wheat barges towed by light draft steamers during that time.

Q Did the carrying of wheat in that way become general and has it since continued?

Answering that way. A great deal has been going by steamers; transhipped here on our steamers.

Q Since 1871? A Yes.

Q When you say "on our

Steamers" what do you mean? A I mean the railroad steamers

Q Since 1871 has not nine tenths of all the freight up and down the river been carried by light draft steamers and barges? A I do not think it has

Q Not so much as that? Ans.

Q What proportion would you say? A I have really no way to get at it, but I think about two thirds of it

Q Do you know, and if you do, state, the difference in freight up the river, on lumber, by barge, from 1871 up to the present time? Just taking 1871 and 1881

A I do not know the difference

Q Do you know at all what the price of freight

per ton was in 1871 - up
freight? A Merchandise
freight?

Q Yes merchandise freight
a Two and a half dollars.

Q In 1871? A Yes.

Q What is it in 1881
or has it been? A \$1.50

Q Is not the fact that
the carrying of lumber on
barges instead of schooners
has been introduced by
reason of the reduction of
freight on barges?

A I think not.

Q How? A I think not

Q You have spoken of
the Stags Beach and Stay
cock Shoals and I
think I understood you to
say that the Stags Beach
had always been an
impediment to navigation.
A Yes.

Q How is Stay cock Shoals
situated with respect to
Cass's Plough and other
ploughs? A Stay cock

phoals.

Q If I said Staycock phoals that is not what I had in mind. I mean Stops Back? A Stops Back is 5 miles above the end of Cash Slough

Q What other sloughs are there that put into the river or formerly did immediately above or shortly above Stops' Back?

A There is no slough.

There is a little slough I think they call Beamer slough just below Stops Back

Q Just below? A It is a very small slough, just below

Q Was there any above?

A I think there was a small slough running through Grand Island above

Q Through Grand Island?

A Yes. Part of the way through Grand Island

It did not extend all the way through

Q Running from the centre of Grand Island out?

A Towards the plunge
Yes.

Q The whole of Grand Island was simply a product of sediment of the river was it not?

Mr Stark The object is that as not in cross examination

<Objection sustained>

Mr Becher Q You have also spoken of a middle ground; where is that situated with respect to Stags Back? A The middle ground is in Pussin Bay

Q How far below Stags Back? A About 20 miles

Q What was the depth of water at Stags Back at the lowest stage of water? A In what year?

A In 1850? A We could bring six feet of

water over Stag's Back
in a low stage of water.

Q Six feet? Ayes.

Q How much leveling
has been done along the
banks of the islands
and on the main land
along Steamboat Slough?

Mr. Cadwalader will have
not asked anything on
that subject

Mr. Belcher Counsel
attempted to show that
Steamboat Slough had
filled. I want to prove
some of the facts from
which the Court can
deduce the cause

Mr. Hart This Witness
was put on the stand
simply to prove the amount
of filling in the Sacramento
River. Now I do not
understand that they
can examine him to
bring out some other theory
or some other fact.

The Court Strictly, I presume

not

Mr Belcher But I take it the amount of filling in the river and in the ambouat slough is entirely immaterial unless it be connected with the defendant

The Court The objection will be sustained

Ans

Mr Belcher We except

Q You also spoke of Stacey's shoals. When did you first know there was a shoal there?

A There was always a little shoaly place there

Q When you first knew the river then there was a shoal there?

A When I first knew the river.

Q That was in 1850? A Yes.

The Court Stacey's Slough? Is there a slough?

A A shoal.

Mr Belcher Q Did that

shoal extend across the river? A Yes.

Q When did you first notice any increase in that shoal? A Well we never had a great deal of trouble with it; we never had any trouble with it up to sixty —

Q Until? I do not care whether you had any trouble with it or did not have. I asked you when you first noticed any increase in that ~~shoal~~ shoal? A I noticed it in 1862 and 1863. I think that was the first I noticed it, that it was shoaling. It was not a very shoal place at that time.

Q Did you know what the depth of water was on that shoal in lowest water in 1851? A Yes.

Q What was it?

A At low stage of water

about 15 feet

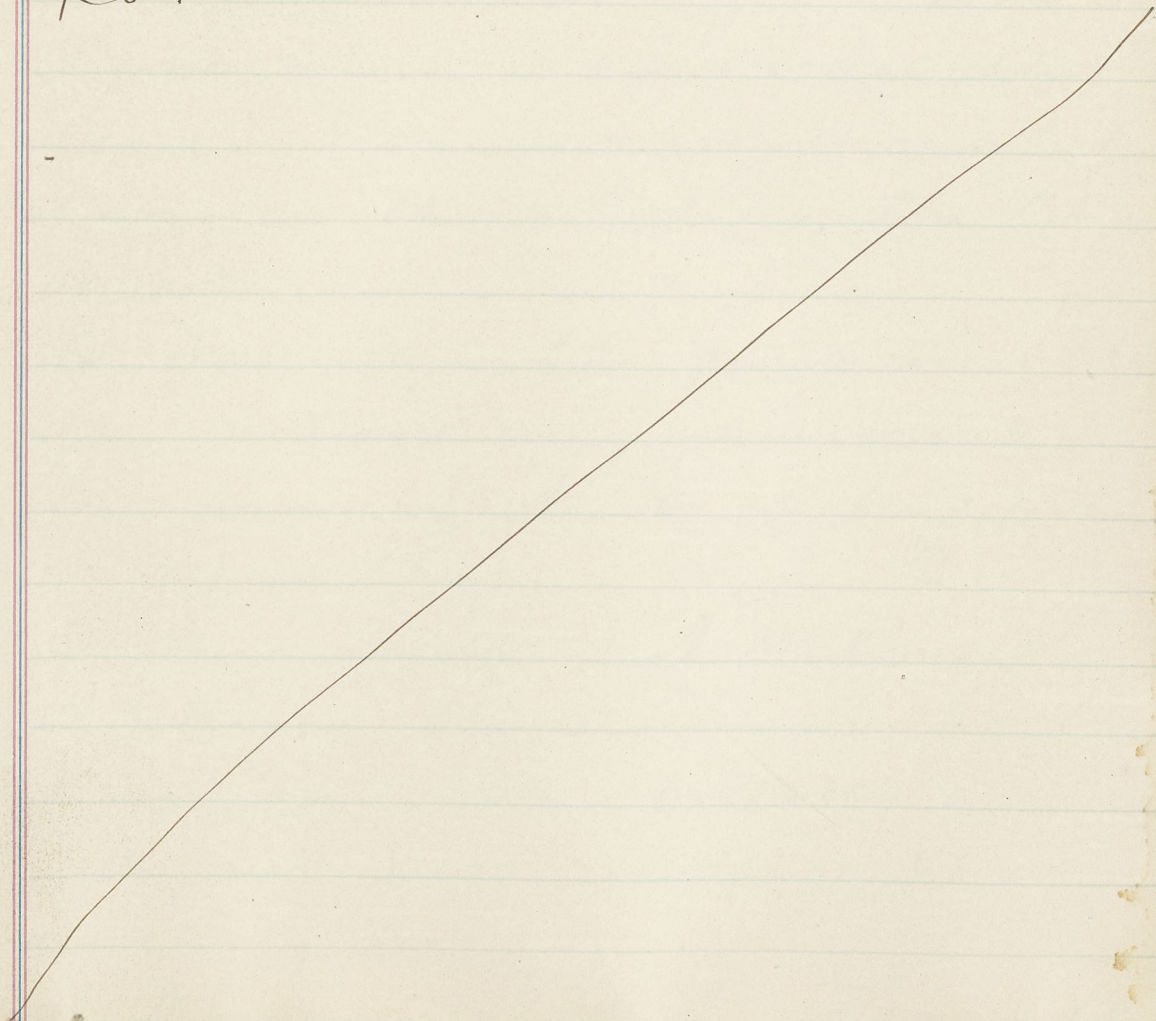
Q About 15 feet in the channel? A Yes.

Q Was there a bank of sand upon either side of the ~~river~~ river at that time? A I think not.

Q Do you know whether there was or not?

A There was not.

Q Was there water of even depth across the river? A I think nearly so.



Q Do you know whether it was or not? A. I have hove a lead across there. There may have been a foot or six inches difference, take the entire length across.

Q Do you mean you threw over the lead as you were going up or down, or that you made soundings? A. As I was beating down the River, stretching down along across the River

Q You were at the wheel
A If I was not at the wheel I was where I could see the lead. I cannot recollect whether I was at the wheel at the time or not.

Q Was 1862 the first time that you noticed any sediment in the River? A. No, I had noticed it before that.

Q How early? A I think I noticed the sediment in the River in 1854, probably earlier. I do not just recollect. It was as early as 54.

Q Where? A I noticed the

water was discolored all along
the River

Q All along the River ?

A From Sacramento down

Q You spoke about black sand
where do you find it ?

A. At low stage of water on Hogs
back it is mostly black sand

Q Do you know how much
sediment is brought down by
Cache Slough ? A No

Q Is the material brought down
by the San Joaquin River thrown
upon the Hogs Back and deposited
there ? A No

Q Do you know whether it is
or not. ? A. By the San Joaquin
on the Hogs Back ? No.

Q Is Hogs Back above it or
below it ? A. About 18 miles
above it.

Q Are there any sloughs that
cross just below the Hogs Back
to the San Joaquin.

A. No

Q. None ? A. Well there is
One three mile slough below
Rio Vista, I think about ten

Miles below the Hogs Back
 Q You stated that in 54 you noticed the deposition of sediments. When did you notice that the River became muddy in summer season?

A. I think it was previous to 54 — my recollection is.

Q Was it not muddy when you first came to the River in 50? A. No. It was as pretty a clear stream as I ever saw.

Q Was it muddy in high water then? A. Not in 50.

Q Not in 50? A. Not in the winter of 51.

Q In the winter of 51 you say it was not? A. I did not notice any discoloration of the water? A.

Q No discoloration of the water in flood? A. I do not recollect of any.

Q Was there any flood that winter? A. In 51? Yes, a small flood; a small rise

Q What do you mean by that?

Was there sufficient water in the River to carry it out through any of the sloughs into the tule?
A. Oh yes, It raised the water in the River probably 8 or 10 feet.

Q You were sailing up and down the River. I will ask you if there was any water in this tule to the west of the town or City here?

A. I could not tell you. I could not see it. I never was over there during that time. There was a good deal of trees and stuff on the banks so you could not see over into those tules from the River.

Q Is it not true that you can see that tule very nearly all the way from here until you get down to Rio Vista?

A. You can now but you could not in '50 and up to '53.

Q You spoke of black sand. Is there any black sand in this River here? A. Abreast of Sacramento.

Q Yes ? A. I do not know whether is or not. I have never taken it up

Q Have you ever seen any there
A. No.

Q Have you ever seen any black sand between sacramento and the head of steamboat slough
A. Yes.

Q Where ? A. I have seen it on Hogs Back.

Q Is that the head of Steamboat slough ? A. Oh well it is about

Q (Interrupting) What was the question which I asked you
A. I beg your pardon. I thought you spoke of the lower end of steamboat slough.

Q I said the head, What do you mean by the head ?

A. This end the upper end

Q Very good. Now answer the question ? A. Yes where

Q Where ? A. On Haycocks Shoals

Q When did you see it there

A. I saw it ten years ago when I was lying there aground

Q Ten years ago. in 71

A. Yes

Q In considerable quantity ?

A. Yes, we pumped our hose full of it out of the River in trying to pump water into the boilers it was completely filled with black sand

Q Have you ever seen it at any other place ? A. Below I have

Q What was the boat you were on then ? A. The Gosomite

Q You were pilot on the Gosomite at that time ? A. In 71 I was Captain of her — Captain and pilot.

Q And you ran aground there A. Yes

Q Had it been necessary prior to that time and for the ten years prior to that time. in low water, frequently to wait below those shoals for the tide

A. Not ten years previous to that time

Q How long previous to that time ? A. Well I cannot tell how

long but I think probably with-
in two or three years we had
to stop there

Q Is it not true that in the
Summer of 64 you had to do
that? A. I cannot recollect
stopping there in 64

Q Do you recollect the season of 64
A. I have a slight remembrance
of it.

Q Do you remember whether it
was a season of very low water
or high water? A. The winter of
64 or the summer of 64?

Q The winter of 63-4 and sum-
mer of 64? A. We had very
low water in some portions of
the River.

Q. In some portions? A. Yes.

Q Then I ask you about those
shoals? A. Well I do not
recollect my stopping there in
64. I might have done so
but I do not recollect it now

Q Now you say that all the way
through to San Francisco the
Channel has filled? A. Yes

Q Is it chiefly black sand?

A No. Nor when you get down into the bay it is not black sand
 Q. Where does the black sand cease? A. Hogs Back I think is the farthest I have noticed that kind of sand. I never had occasion to —

Q (Interrupting) That is almost the only place with the exception of Haycock Shoals where you have noticed black sand is it not? A. Yes! And one or two

other places where I have been aground this side of Hogs Back

Q Where? A. Just below the end of Steamboat Slough

Q That is just below Hogs Back? A. No

Q That is above Hogs Back? A. Above Hogs Back

Q Now what is the character of the filling above Hogs Back in the Channel below, in the bay? A. The only way I know below is by sounding the bed. We get a sort of a soft mushey stuff with a little grey sand mixed with it. We put a little

tallow in the lower part of the lead and bring up this sand
 Q Black mud? A. It is a sort of grayish color, not exactly black
 Q Now do you mean to say that the main Channel in San Pablo bay is filled? A. Yes

Q To what depth? A. Well in '80 when I was Schoonering up through there down through the Ship Channel we could get, all the way through the ship Channel, about eleven fathoms of water and from that to twelve

Q In the ship Channel you had from eleven to Twelve fathoms of water? A. Yes

Q That was in '80? A. Yes

Q Now at the same place in '81 or '80? A. This last winter, this winter a year ago I was sounding up through the same place with five and six fathoms of water

Q That was in the main ship Channel? A. Yes. Right about the same course.

Q That was in the winter of '80

A Yes

Q Seventy nine 80 ? A Yes

Q Whereabouts were those soundings made? I would like to identify the place as nearly as I can ? A I can give about

the Courses up through there

Q Is there anything upon the land that would indicate about where it was ? A. Take it off Pinola Point.

Q And in the main ship Channel ? A. Yes

Mr Cadwallader That is in San Pablo Bay ? A. San Pablo Bay

Mr W & Belcher And very nearly abreast the Point ? A. Yes.

Take it off in the ship Channel Abreast the point.

Q. Have you ever been around in the mouth of the Creek which comes down past Napa-Napa Creek ? A. At Vallejo ? it comes in through there by Vallejo.

Q Have you been in there ? A. I Run in there, in and out there, every day.

Q Do you know whether there has been any filling there?
A. Nor by actual measurement.
No.

Q Have you ever been westward passed Vallejo out beyond Mare Island and in that direction,
Q Passed the mouth of that Creek
A. Up in that direction, I have been up Stapa Creek up as far as Suscol.

Q Now do you know whether there has been any filling at and near the mouth of that Creek?
A. That is at Vallejo; that is the emptying of that Creek. I suppose, at South Vallejo, no, I never have had the lead there.

Q Do you know what is about the depth of water there?
A. In the mouth of the Creek at Vallejo.

Q Yes? A. About 35 feet

Q That is in the Channel?

A. Yes.

Q Do you know whether that Channel has narrowed since

You first became with it
A. Some

Q How much? A. It has
filled in some from the east
bank of the Creek.

Q From the east bank of the
Creek? A. Yes. Filled in from
where they built the wall, filled
in with sediments around.

Q To what extent? A. I cannot
say. Probably one hundred
yards

Q Do you find the filling to
the same extent all the way to
San Francisco as off Pinola
Point? A. Yes. We notice a
change in our soundings all
the way through

Q All the way through?
A. Yes.

Q And filled to about the same
extent? A. Yes

Q And the depth of the Channel
is from 12 fathoms to six
fathoms? A. No: there are
some places where probably it
gets a little narrower, down
by the Brothers, and where

it is narrow again it has
probably more soundings, more
water

Q At the Two Brothers how
much filling is there in the
Ships Channel? A Probably
fifteen feet

Q Fifteen feet filling in the
main Channel? A Yes

Q Is the main Channel on
the east or west of the Island
A. Of the Two Brothers? on the
West

Q And there there is a filling
of fifteen feet? A. About that

Q The same in the east?

A. No. There is only a narrow
space down through there,
there never was as much
water ~~at~~ between Pablo Point and the Brothers
as there was outside of the
ship Channel — never was

Q Is there approximately the same
amount of filling? A. No, I do not think
there is, I think it is narrowed in
there and has not filled up so much
It has more chance to cut
through

Q How is it to the East
ward of Angel Island?
Have you made soundings
there so as to know as to
the filling? Arles. I
have have the lead down
through there

Q What do you say as
to the filling there in the
main ship channel?

A It is filled up con-
siderably there.

Q Is it filled up as
much as at the Two
Brothers? — 15 feet?

Ans. It is not filled
up so much there.

Q How much, will you
say? A I will say 8 feet

Q What is the filling
there? black sand?

A I do not know.

Q You do not know what
it is? Ans

Q You never brought it
up when you have the
lead? Ans

Q Did you bring it up

with the lead at the
Two Brothers? Ayer.

Q What was it there?

A A sort of a greyish
black sand

Q Reddier black sand?

A Greyish ~~black~~

Q And it is the same
thing all the way from
there to Carquinez Straits

Ayer. I think about
the same thing

Q A greyish black sand?
Ayer.

Q How much filling at
Carquinez Straits?

A I do not know exactly
how much filling at
Carquinez Straits. I never
bore the lead through
there

Q You never bore the
lead through there at all?

A I have not bore the
lead through there since
1850

Q What was the depth of
water there in 1850?

A At Carquene Straits
well about 50 feet

Q What did you find
on the bottom?

A I do not recollect, it
is no far off.

Q What did you find
off Pinole in 1850 on
the bottom? A There
was a soft muddy
bottom

Q What color? A Quite
dark.

Q What, sand? A I
do not recollect sand.

Q Dark mud? And
in 1880 you found what
there? A A dark
greyish mud, sand
mixed with it.

Q Pretty coarse sand?
A Yes Sir

Q Coarse enough for
building sand? A Well
I do not know

Q Mortar? A I do not
know as I could tell
what building sand was

myself.

Q Now that middle ground you have spoken off in Luesine Bay, when did you first notice that as beginning to form?

A I think about 1863 or 1864.

Q In 1863 or 1864, it began to form upon the South side? Ayes sir.

Q Was there shoal water there in 1850?

Ayes sir.

Q On the South side?

Ayes sir.

Q What depth of water at low water?

A Close to the bank.

Q Close to the bank? on the South side of low water? A Well I think it ran very near dry perhaps for some distance off.

Q At that time in 1850 did you make any examination so as to

determine what was the material there? And

Q When the water was off it and you could see it, was it sand— did it appear to be sand? Answer is looked dark, more like mud

Q Anything growing in it? A Not at that time no sir

Q Now didn't it increase steadily and gradually from the time you first saw it?

A From that shore?

Q Encroaching upon the water every year?

Answer is; since that time there is a channel cut down through there so that we have got a better channel

Q When did that channel cut? A That has cut through there I think it was in 1855

Q That channel cut of its own motion did it? or did somebody go there and cut it? A As far as I could see I saw no appliances there

Q From the time when you first saw it in 1860, the sediment of some character was up near to the surface of the water at low water or quite up to it?

A On the South side yes sir

Q Now in 1855 the water of its own motion cut a channel through there of what depth?

A Well when first cut there about 6 feet, 6 or 7 feet.

Q And that kept cutting deeper and deeper every year until it became of what depth?

A It came to about

10 feet

Q How wide a channel?

A About 300 yards

Q How long was that bank up and down the river say in 1850?

A Where this shoal was?

Q Yes sir

A About 8 miles 8 or 9 miles

Q Now when you were plying in the Capital as pilot was Captain Foster your Captain? And sir

A Who was? A Capt Poole

Q Prior to coming to California did you ever sail on any waters other than the Hudson and that New Jersey river you speak of?

A On the Delaware and Connecticut River

Q On the Eastern rivers never on Western rivers and sir

Q I think I asked you

in regard to the freights
but I am not certain if
I did or not - I will ask
you the question now:
how are freights at this
time as compared with
any previous time upon
the river?

The Court You compared
1871 and 1881.

Mr Belcher Q Are they
less now than they have
ever been before and
have they been constantly
decreasing?

A At the present rates
for some time now.

Q How long?

A I cannot just remem-
ber how long. I think
about 2 years.

Q And these are less
than they ever were
before the last two
years? A Except
in opposition times.

Q It required very
active opposition did it

it not to reduce them to
their present rates?

< No answer >

Q Do you know anything
about the outside of
the bay following along
this coast? A No sir.

Redirect Examination of Enos Forratt

Mr Badwalades Q What
is the difference in time
in transporting freight
by barges as it is frequent-
ly done now and by
steamers in former times?

Mr Becher I object to
that as reexamination
of matters that Counsel
has examined upon.

The Court for in and ask
the question

Mr Badwalades Q What
is the difference in time
in the transportation of
freight up and down the

stream as it was former
 ly done by steamers and
 as it is now done largely
 by barges. All well
 freight shipped formerly
 in San Francisco at
 4 o'clock in the afternoon
 would be here at 2 o'clock
 that night and discharge
 that morning.

Now by barge. A By
 barge it frequently takes
 them from one to three days
 to load down there, to
 get so all enough to come
 to Sacramento and it
 takes about 24 hours
 to come to Sacramento.

All well now going down.

All well going down -

well there is not a great
 deal of merchandize going
 down, more grain.

Merchandize all goes
 by steamer, very seldom
 any goes by barge, very
 little.

time of the trip is what you want

Q A barge will go from here to San Francisco in 24 hours

Mr. Leachman alades Q In running through the bay do you not frequently have to run through what you call soundings?

< Objected to as leading >

Q How do you run in foggy weather?

A I run by course a part of the time and soundings and when I get to a certain time when my time run was nearly up and cannot see the land, and cannot see the lights and cannot see anything, then I slow my boat and run her by soundings until I find something

Q Do you have a chart to run by? Ans. sir.

Q How far is Pinole Point

from the mouth of Napa
Creek? A I think it is
6 or 7 miles

Q Do you remember what
time the California Pacific
bought the steamers of the
old California Steam
Navigation Company?

Ans sir, I do not re-
collect just the time

The Court In 1871 he
said he thought

Wheeler I under-
stand him to say he
does not recollect?

A I do not recollect
just the time. We could
not tell exactly who
they did belong to.

Q You recollect what
time the California Pacific
Railroad was completed
to Sacramento? Ans sir,

Q Do you recollect whether
the California Pacific
Railroad ever carried
any freight from San Fran-
cisco to Sacramento?

Q They did not carry any freight

Q What part of the time pay from 1865 to this time has there been opposition on the river

< Objected to as immaterial >
Mr Badwalader The point is this: to show that when there is opposition the freights were always down to \$1.50 a ton sometimes to four bits. It is simply in reply to Mr Belcher's commercial rates

The Court Necessarily such rates would be exceptional

Mr Badwalader I want to show that there was opposition nearly all the time

The Court Ask the question

Q By Mr Badwalader
 What proportion of the time since 1865 has there been opposition on the river? A Well I

think nearly two thirds of the time.

Q What effect has that had upon the ruling rates of freight and passage?

A 20 times is

Q How as compared with a dollar and a half — how low?

A Well it has been down I think — we have carried freight to Sacramento for fifty cents a ton — I think they have.

Q What do you have to pay in the matter of the stuff that you find in the ships channel in Suisun and San Pablo Bay comparing that material that you find in the Sacramento as shown by your soundings or by actual observation?

A It has the appearance of the same kind of lighter material in the Sacramento river —

the same appearance.

Q What kind of stuff is brought down Napu Creek? A I do not know.

Q You never saw any of it did you? A No sir

Q Have you ever seen any of it at low tide at Vallejo? A Well not to notice it particularly. Of course I have seen it. but never noticed it particularly not knowing whether it came from Napu Creek

Q You say your ship has no chart to show the general course through the two bays? A No sir we have a compass to show our course.

Q I will ask you then; I do not know how it is is there what is called a channel through both bays that is traversed by the Paumotu steamers?

Ayes sir

Re cross Examination
of
Enos Fouratt

Mr Belcher Q You say
freight formerly was
put aboard at San Fran
cisco at 4 o'clock in the
afternoon and arrived
here at 2 o'clock the next
morning? Ayes sir

Q Put aboard the cars
now at 4 o'clock in the
afternoon what time
does it arrive here?

a I do not know

Q Do you know how
long it takes a train
to arrive from San Francisco
here? Ans sir, not

a freight train

Q How long does it take
the m/c to come from
San Francisco here?

Ans well she can come
up here in 16 hours

Q Is that her usual trip? And her average time is about 16 or 17 hours

Q Does the Modoc stop at all the way stations along the river? Ayesis

Q Did the boats in the old times, those carrying passengers make the same stops? And, we make more stops than they did

Q Do you make five or six times as many? And.

Q How many stopping places do you have?

A Our regular stopping places is 14

Q How many did the Chrysopolis have when she ran on the river? a three to four

Q Did she ever stop between here and Beneva? Ayesis

Q At Rio Vista? Ayesis

Q Rio Vista and Benueu
were there any other points
at which she stopped
except those two? A Yes sir

Q Where? A Collinsville

Q When she stopped at
Collinsville did she stop
at Rio Vista? A Yes sir

Q At both places?

A Yes sir

Q Were there any other
places except those three
then? Ans, no regular
landing

Q You say that some of
the freight was taken for
50 cents a ton? A I
think so, I won't be certain
about it, I think so and
possibly lower down.

Q That was when Kidd's
opposition was running?

A I think it was when
the Queen City ran, I
think they had a hot
opposition then

Q Now do you mean that
the Queen City has run

at all since 1865 as an
opposition boat on this
river? And I do not
think she has since 1865

Q Has she since 1860?

And Sir, I think not.

Q Has she since a con-
siderably earlier time
than that? Well she
ran in 1854

Q Well that is a good
deal earlier. Well now,
has there been any time
when freights have been
reduced to 50 cents or
approximately that except
when Capt. Kidd's boats
were running, the Nevada
and another on the river
in opposition to the old
steamboat Company?

Well I do not know of
my own accord but I have
heard that there has

When were those boats
of Capt Kidd's running?

A I think the Nevada
was lost in 1862.

Q Well now has there been anything on the river since that time, since 1862 and 1863 when the Nevada was lost, that could be called an opposition?

A Oh yes sir —

Q Well what? A Well the Whipple ~~has~~ here and two or three others

Q The S. M. Whipple? That was a single boat was it? A Yes sir a single boat.

Mr Goodwalader A I want to ask you one question and that is in regard to the boat mentioned by Mr Belcher; Stead's boat the Nevada, where did she sink? A She sunk just —

Mr Belcher (int?) If you desire to go into that, and how she sunk I do not know that we should object because the Court might be pleased to know

that she was run into and
sunk on purpose

Mr Badwalader I want to
show that she was in the
same condition as the Cora
that she was filled with
sand so that they could
not raise her, and that
was still further down
the river than Rio Vista

Mr Belcher I have no
objection to the proof

Mr Badwalader O Do you
recollect about that?

Ayes sir

O Just describe it where
she sunk

Mr Belcher And who
sunk her.

Mr Badwalader No, that
does not make any difference

A She went in the point
just below the mouth
of what we call the Old
river at the junction of
steamboat slough and Old
river where they come to
gether — they went ashore

on the South point of that portion of the river, the South bank, or the East bank I would call it, and sunk there. They went to San Francisco and got pechoners and came up there - four pechoners, two each side of her and before they could get their chains under her - I think they did get one or two chains under her, she was covered up with sand right over through her decks and everywhere and she lays under that sand there yet.

Mt Belcher That was in 1862? A Yes I think that was in 1862

Q How far below the foot of the island?

A It was right opposite to the lower end of Grand Island

Q Right opposite to

the lower end of that island?
Ayes Sir

Q Just below the junction
of the slough and river?
Ayes Sir

Mr Goodwin alades Co She
was a big side wheeler
was she not?

Ayes Sir

Q Do you recollect her
dimensions? Ams Sir I
do not.

Mr Belcher I suppose you
will admit that it was
generally understood
that she was sunk on
purpose.

Mr Goodwin alades I never heard
of it before.

Mr Bart he will admit
it if you think it is material
to your case.

— " —

Testimony

of
J. B lygreen

Called for plff. Sworn.
Wtstart Q What is your
occupation Wlygreen?

A Fruit raising and
general farming

Q When did you come
to this State? A I arrived
in December 1849 at
San Francisco

Q What part of the State
did you settle in?

A I settled on the Sac
ramento River where I
now reside

Q Where do you now
reside? A Near the
end of Randall's Island
about two miles above
Frank Island on the Yolo
side, the West side

Q Is that above or below
Frank Island?

A It about four miles
above Frank Island

Q What is the name of the place where you live? Its general designation?

A Green's Ranch is the name of the place I live on

Q Well what is the name of the island that you live on? Amerritt Island

Q Just above Randall's? Ayes, to the west of Randall's opposite the head of Randall's Island

Q How far is your house located from the banks of the Sacramento?

A About 100 feet I think, maybe 150 feet from the river banks

Q In 1849 or 1850 when you settled at your present place of residence state what was the character of the Sacramento river?

A The Sacramento river was a deep stream clear, and with bluff banks both sides, very bluff

Q What was the nature of its bed with respect to uniformity or lack of uniformity? A In 1852 I had occasion to measure the river for the purpose of laying a chain for a ferry and I found it 200 yards wide and perfectly level or very nearly so not varying over 4 or 5 inches in a distance of over 500 feet crossways of the river, a section

Q How deep was the water at low water mark at that place take it?

A At the very lowest place it was 22 feet at low water, the lowest tide

Q How far were you acquainted with the river up and down at that time?

A Well I have been acquainted with it all the way from there to the City of Sacramento

and below in fact, the whole length of the river from the City down but not so accurately.

Q How far up and down the river did you know its depth at low water?

A Well not by measurement could I say, except at my own place, but the general appearance was that the depth was uniform.

Q You say the banks were bluff; how high were they above low water marks? A At that place they were 11 feet.

Q By actual measurement or guess? A Actual measurement.

Q How far up and down the river did you know as to the character of those banks?

A Well I have travelled up and down the river in small boats and also on steamers from Sacramento

to my place frequently,
and occasionally below
from there down

Q What do you say as
to the nature of the banks
as you go up farther towards
Sacramento? A I noticed
that the banks were uni-
formly bluff all the
way to this city.

Q on both sides?
A yes sir

Q How far down the
river did you know the
banks to be the same?

A That is at that time
in 1850 and 1851?

Q I am speaking of
1849 and 1850?

A The banks were bluff
but they were lower as you
went down, they were not
as high at Grand Island

Q Was it a gradual
decline or abrupt?

A It seemed to be a
gradual decline, they
were equally bluff however

Q What was the nature of the water that was then running in the stream?

A The water in 1850 and 1851 and 1852 was clear in the Summer time, when water was high. In the Winter Season it would be colored a little. You could not see as deep.

Q What color? A It had a slight muddy color. In the Summer Season you could see fish 5 or 6 feet down and in the Winter Season you could not see them so far down.

Q How far down could you see them in the Winter? A You could see them 2 or 3 feet down.

Q When did you say you made this measurement with a view of determining the depth of the river? A It was in October 1852.

Q Did you ever again have occasion to make a measurement at the same place? A Yes sir I measured again two years ago.

At what time? A I think in the month of October 1879

What difference did you find in the river bed?

A I found 11 feet difference

Q 11 feet? A The fill had been 11 feet

Q How far up and down the river did you make that measurement?

A I measured it only directly over the same measurement that I made before in 1852

Q At a distance of 500 feet again? A The river is 600 feet wide there, the distance for 500 feet is level or nearly so

Q That was measuring across the river? A Yes

is a sectional measurement

Q It was level in 1852 across the river a distance of 500 feet? A Yes sir as you approached the shore, each shore is gradually arose, not so deep directly at the bank

Q How did you find it in 1879? A The bottom of the river had retained its uniform and normal character but had lost 11 feet — there was 11 feet fall

Q Did you notice the character of material with which the river had been filled? A Well I did not take up any from the bottom. I only knew it from the fact of running down a pole on it

Q What was the effect?

A It seemed to be a ~~solid~~ ^{solid} hard beach like the beach of the ocean and a pole would rebound

when you ran it down to the bottom and struck it with any force; it would spring back.

Q That was under the water? A That was under the water.

Q Did you notice the filling on the sides?

A The sides as you approached the bank was softer - it was of a pediment character. It would strike in the sides when you got within 25 feet of the bank you would run a pole down through maybe a foot of muddy sediment and when you drew up the pole you would see the same character of sediment that you saw on the side of the bank - reddish.

Q That was near? A Near each bank.

Q Near each bank but under the water? A Yes sir.

Q What was the color of the sediment? A A kind of yellowish red. color, very fine floury sediment

Q How does the sediment compare with the natural color of the soil along the banks of the river between Sacramento and your place? A The natural soil was black before any sediment was deposited upon the banks

Q Have you ever made any observation with a view of determining the amount of filling between your place and the City of Sacramento?

A No other than this measurement. I have noticed that between this place and Sacramento large bars are formed at the various bends of the river where formerly it was a very bluff bank

very steep, in fact the banks were so bluff that it was difficult to climb out of a boat unless you climbed by the vines roots and so forth.

Q What is about the average depth judging from what you have seen of the river what is the falling between the City of Sacramento and your place? A Well I should judge from the appearance —

Mr Catlin (into) He has not measured that

Mr Hart It is simply an approximation

Mr Becher I object to that. The approximation is not of any value when we have measurements.

The Court I think we will take the estimate from

A There were many places where bars had been formed

at the bends of the river, the
 convex side so as to be
 entirely out of water and
 seemed to grade towards
 the concave shore, the
 opposite shore the water
 seemed to be deep and
 the banks bluff

Mustard Q That is in
 early days?

A That is various - not
 so much at ~~the~~ very early
 day, for the first ten
 years there was very little
 change. Up to 1857 I
 ran a small boat
 upon the river carrying
 vegetables from the river
 — 1858

Q What would you
 pay as the average fill-
 ing between Sacramento
 City and your place?
 at Merritt Island?

A Well I should judge
 it would be fully 12 feet
 up to the present time.

There has been an additional

foot over that same grade

Q When did that additional foot come?

A I measured about a month or six weeks ago - two months ago just before the first rain of the season.

Q You made another measurement in 1880 or 1881? A 1881.

Q Where was that measurement made? A Precisely over the same ground where the two others were.

Q Between 1879 October and when in 1881?

A 1881.

Q What time in 1881?

A I think it was in October.

Q October 1881? A It was October or the first part of November. I think in October.

Q What did you find the difference in the filling?

A I found about 18 inches

Q A foot and a half.
 When did you notice this
 filling in the river? When
 did you notice the first
 commencement of this filling
 in the river?

A I have never made a
 measurement in the river
 so as to know accurately
 from 1852 up to two years
 ago - 1879 and I only
 know from the appearance
 of bars forming in different
 places.

Q Well when did you
 notice that this filling
 had commenced when did
 you see it? A See the
 bars?

Q Yes, when did you
 see the filling coming in?

A Well the bars commenced
 forming I should judge 15
 years ago

Q Did they form to any
 considerable extent at
 first? A No sir - well
 you could not see how

much because they formed under water and you could not see only very little about the shores, you could see that the channel was changing but you could not ascertain as to the accurate amount of the filling unless there had been an accurate survey.

Q How have these deposits come, by degrees, annually, or abruptly?

< Objected to as leading >

A They have come by degrees but very much increased of late years, much faster formed.

Q What do you mean by that? A Well for the first 15 years you saw hardly any fill, that is apparent to a person passing up and down the river but in the last ten years there has seemed to be a very rapid fill, by the bars

changing every way the
general current of the
river

Q How was the river navigated by your place from above to below and below to above at the time you first knew it? A There was a large number of all kinds of vessels running, sailing vessels and steamers and everything but barges. I never saw a barge for the first ten years - for the first ten or twelve years I have no recollection of ever seeing barges used at all but schooners, sloops and steamers were the principal vessels

Q What was the character of the steamers?

A Well there were large steamers all of them or nearly all of them, there were some small ones

Q Do you know enough about steamboating to tell

about the draft of those steamers was? A No sir no more than what the navigators would tell me I had no experience in that line, only such information as I would obtain by asking them frequently what the draft of their boats was sometimes

Q How did they compare in size with the size of the steamers now running upon the river?

A Very much larger

Q Do you know whether or not it would be possible to navigate this river by the large steamers that formerly ran up it?

Mr Belcher I object to that. He is not an expert in navigation. He has not shown sufficient knowledge to make his evidence of any value upon the subject upon which he is now being examined

The Court I do not see that he has any special knowledge

Mr Hart I am simply asking him whether he knew if the same kind of steamer could now navigate the river, I did not ask for his opinion - did you ever navigate this river?

A I navigated it with a small vessel drawing about three feet.

Q How long? A Well a couple of seasons, a couple of years

Q Well I will ask you whether or not you know whether this river can be navigated by the large steamers or could be navigated by the large steamers that used to navigate it?

Mr Beeler I make the same objection

The Court I do not think that he has shown sufficient

skill in the matter. I sus-
tain the objection. There
are exceptions

Ans

Question Q Now what is
the depth of filling below
your place in the river?

A After passing about
a quarter of a mile below
the place where I made
this measurement across
the river, I have had occasion
to measure again, against
the wharf on Randall
Island. A bar commences
to form on the West side
of the river this bar reaches
to the top of the bank.

On the East side of the
river directly against our
wharf the water was 33
feet deep at that time

Q What year was that?

A That was 2 years ago.

Q That is where you made
the measurement again?

A That is where I made
that measurement at the
same time for other purposes

Q Have you since made any measurements there?

A Yes sir. I think I have measured a part way across the river since in order to determine whether there had been any partic plan change next to the wharf - we built a wharf on Randall Island and it was very deep water. The channel had changed over on to that side and was cutting the bank and we had occasion to measure the water in order to ascertain whether there had been any cutting next to the piling of the wharf - there did not seem to be at that point much change.

Q When was the last measurement you made?

A That was about two years ago.

Q Have you made any since?

A I have not made any since.

Q Did you notice what

the difference in the filling
~~was~~ ^{on} the opposite
 side of the river?

On the opposite side
 the bank had filled
 till the bar had come out
 of the water. It has come
 out of the water and then
 partly washed away, it
 has partly washed away
 several times

Mr Belcher This bar was
 on the East bank?

A The bar was on the
 West bank

Mr Stuart O where is
 Steamboat slough with refer-
 ence to your place?

A Steamboat slough is 4
 miles below us

Q What is the nature of
 that slough? A The
 banks of that slough when
 I first knew were deep
 and like the river. The
 river appeared to be the
 same

Q Was it straight or crooked

A It was quite crooked, steamboat plough was.

Q What was the difference between it and the river with reference to crooks and angles and turns

A Well being a narrower stream they were sharp, it was rather more crooked than the river

Q How much narrower was it than the main Sacramento, what was known as the Old River?

A I would have to speak approximately in regard to that for I never measured it

Q Speak approximately

A I should judge it was half as wide as the river

Q What was the difference in the depth here, the plough and the old river

A I do not positively know. I have always been of the impression that it was the same

Mr Belcher No matter what your impression was if you do not know?

A I do not know positively
Mr Hart & what was the difference in the current that ran through those channels? A The current seemed to be more rapid than in the river

Q Do you know what kind of boats formerly navigated Steamboat Slough? A Yes sir

Q What kind?

A All the large boats went through that slough

Q Do you know an ocean steamer when you see it?

A Yes sir

Q Did you see any of those? A Yes sir

Q Where did they go?

A They all went through Steamboat Slough

Q What is the condition of Steamboat Slough at this time? A It is full of bars very shoal to all appearances

I have never measured it.

Q Can you make an estimate of the amount of filling there? A Only approximately so. I should judge it was half filled up

Q What was formerly about the depth of these banks from low water marks?

A Well I should judge from general appearances that the banks there were about 6 or 7 feet high probably 8 feet

Q How high are they now from low water marks?

A Well at low water mark the banks are not so bluff but the bank is the same height that it was before

Q What is the reason of that? A For the reason that water never goes as low now in the tides as it did then

Q What is the reason of that, that it is not as

high as it was?

Answer it is that the banks are so high. There is no change on the top of the banks, no particular change.

Q Is there as much water running through it now as formerly? A I should think not.

Q How deep is the water there in the summer time now through that slough?

A I could not say but it must be quite shallow.

Q Is it deep enough for any kind of steamboat to run through?

< Objected to as leading >
Restart Q How deep with reference to navigation?

Answer not trying to navigate there I could not assert only from what I understand and from old navigators.

Q Have you seen it in the summer time? Answer

Q Well could you tell what kind of bed it ran through there? A No I could not tell how deep a draft boat could come through

Q Is there any considerable depth of water there when you see it in the Summer time? A There were bars that would seem to be shallow. I did not measure them

Q Could you tell anything about the depth of water over those bars?

A Not positively

Q Well could you approximate it? A Well I should say there might be 5 or 6 feet or 4 or 5 feet; I could not tell

Q Four or five feet deep in the summer time?

A Yes sir. I could not tell. My testimony in that respect would not be valuable

Q Are there any other sloughs there that have been filled up? A Yes in the slough forming the East side of Randall Island is nearly entirely filled. It is called Stensley's slough.

Q What is that slough filled with? A Sediment and sand.

Q Filled with sand you say? A Yes sir.

Q What is the character of the sand and sediment filling that slough?

A Well it was mostly of that fine floury sediment with some very fine sand. By floury I mean the lightest soil that floats in the water. This yellow — some call it slickens.

Q Is there more sand or more sediment? A About equal parts, about half and half.

Q How far is Merritt Island from Sacramento City take your home where you live.

A We call it 18 miles by land and twenty five by water.

Cross Examination of J. B. Green

Mr Catlin What was the extent of Merrett Island?

A. It is about nine miles I think eight miles and three quarters long.

Q Which side of Sacramento River? A. On the West side, the gold side.

Q This lower part you say is about four miles above the mouth of Steamboat Slough.

A. No. Sir the lower part is but two miles above the mouth of Steamboat Slough. Sutter Slough forms the lower boundary. The southern boundary, the south western.

Q What forms the western boundary of Merrett Island?

A. Elk Slough.

Q Did you locate it as swamp and overflowed land or did you purchase it of others?

A. I have two purchases one

is a government purchase and
the other swamp and overflowed
lands

Mr Hart I object to any further
testimony upon that subject
upon the ground that is
irrelevant and immaterial and
not in cross examination, I con-
fined the examination of this
witness to the bed of the River

Mr Gallin I was merely trying to
get a description of the land -
What is the western boundary
of it - you stated Elk Slough
& Where is Hensley Slough
that is filled up?

A. East of Randall Slough on
the other side of the River

Q Hensley Slough is on this
side of the River

A. On the Sacramento side
but it has nothing to do with
Merritt Island, it forms Randall
Island.

Q Was there any levee over there
on the east side of the River

A. Yes sir

Q Was Hensleys Slough filled

Was the mouth of that levee
A. It was not until after it was
nearly filled up.

Q I did not ask you when it
was I asked you if ^{it} had been
levee {

A. It is levee now =

Objected to or not cross

Examination =

The Court It is manifestly a
Cross Examination.

& Mr Catlin was there a levee
built across closing that up
so as to permit the water of the
River running through it {

A. When.

Q I ask you if it ever was {

A. It has not.

Q Well when was it built {

A It was built about eight years
ago

Q Has your levee been continued
there during the past eight years

A. Yes Sir

Q So that now the water of
the Sacramento when it is
high does not pass through
Hensleys Slough {

A. Nor through Hensley Slough
 Q. How did the water of the Sacramento formerly get there before this levee was built

A. It nearly filled the slough. There was very little filling it took to make ^{the} levee.

Q. I am speaking about the water, what did the water pass through in an early day

A. The water which passed through at an early day passed through a deep channel

Q A deep Channel. From Hensley Slough where did the water pass

A. Into the River again at the lower end of Randall Island

Q It passed back into the River } A. Yes sir

Q I will ask you whether it did not pass into the tule lands and cover the tule lands

A. No sir it had no connection with the tule excepting a small Beaver slough that went out on the side of it, a very small slough.

Q It went out of Beaver Slough

And went into the tule,

A. Yes sir, that went into the tule

Q So the water ascending in former times would pass through Hensley Slough, through the Beaver Slough in part and then into the tule and filled them up with water?

A. A very small portion not one tenth part of the slough went through there?

Q That is to say that Beaver Slough had not more than one tenth the capacity of Hensley Slough? A. No sir not more than one tenth,

Q But the water passed through there and filled up the tule region in that vicinity didn't it? A. It did not fill them up it contributed some to it.

Q Well from what sources were the tule filled up in that neighborhood on the east side of the River? A They were mostly filled up from the Plains water and from

the backing up of the Mokelumne
Q That levee has stood all the
time since it was built, the
past eight years?

A Yes Sir

Q Now at this point where
you say you measured it
where you were about building
your wharf, was that near
your place? A Yes about sixty
rods below the head of Randall's
Island and about eighty rods
below my residence on the Merritt
Island side.

Q Well now was Randall Island
below Merritt?

A It lays against Merritt partly
laps upon it

Q Randall Island is on the East
side? A It is on the Sacra-
mento side.

Q Is that a small Island

A A small Island containing
a little over four hundred acres

Q You can point out on the
map, the names are not marked
on here, point out where Merritt
Island is & The witness shows

on the map)

Q Now does Elk slough run the way that does (Referring to the Joy map) or does it run down nearly parallel with the River } A. It ran parallel with the River, It is a long Island about nine miles long and at the widest point it is about two miles wide, That little short slough is Sutter Slough, It ran down to the River and this is Merritt Island (Referring)

Q How deep was the water in 1850 and 1852 at the place where you found it to be 33 feet deep when you measured it in 1879 }

A. I did not measure it at that time I have no knowledge positively as to that point.

Q Well from your judgement do you suppose it was any deeper in 1850 and 52 than it was in 1879 at that point }

A. Well if you want to know

My opinion about it I can tell that very readily my opinion that it was not near as deep at that time as it is now.

Q Then you think that the original bed of the River has been deepened there?

A. I think that the forming of the bar on the opposite side deepened the Channel at that point.

Q The Channel of the River, but do you think the water has cut into the original bottom of the River and deepened it there? A. I do.

Q Why do you think so?

A. Because of the peculiar whirl of the water and by the forming of the bar on the other side, then a strong current set in from the little bend in the River there and the bank is peculiar there it is a different soil.

Q How did you find the bottom of the River when you

Measured it in 1852, solid ground ?

A. It seemed to be comparatively so I do not recollect quite so much about that, I was more attracted as to its depth and uniformity - level.

Q You say that you navigated the River two seasons

A. Yes sir

Q Between what points did you navigate it ?

A. From my Ranch to Sacramento City.

Q From your Ranch to Sacramento

A. Yes sir

Q In what trade or business

A. I was simply carrying Vegetables from the Ranch in a small vessel

Q What sized Vessel

A. It was only about ten ton, a small little sloop

Q Outside of that you have no personal acquaintance with Navigation have you

A. Not in the running of any Vessel any more than a

Skiff. I have travelled up and down in an early day that used to be our principal way of coming to the city

Q You travelled in a canoe or skiff ? A. Yes sir and sometimes in steamers but very seldom

Q When you travelled in the steamer you travelled as a passenger I suppose,

A. Yes travelled as a passenger

Q We are all navigators in that sense. when you speak about knowing an ocean steamer when you see it, you have seen Ocean steamers

travelling up and down the River

Do you refer to the Wilson G. Hunt and the Confidence

A. Well I know these boats but they were much larger boats than those — the Senator

Q My question is did you know these boats the Confidence and the Wilson G Hunt

A. I do

Q Were they Ocean Steamers —

Were they what you call ocean steamers? A. Well they are steamers that have come around the Horn as I understand. Q. You mean by that were they built for ocean navigation or were they built for River navigation? A. That would be a matter of opinion I should they were built for River navigation.

Q. I will ask you when did Hensley slough first begin to fill with sand - when did you first notice any deposit in Hensley slough?

A. I should think it was along about 1860 - 61 and 62 or in the neighborhood of that time that we noticed any serious filling.

Q. Noticed who? A. Noticed any important filling to it.

Q. The first important deposit in Hensley slough coming from the River you noticed along about 1860.

A. I think it was or somewhere

from 1860 to 62, in the flood of 1862.

Q Now before that had you noticed any deposits

A. No sir

Q None at all } A. None that I was certain about. It was a very deep slough there and vessels passed through it

Q What kind of vessels

A. Well Schooners of 100 Tons that went into it for the purpose of loading with wood some steamers have passed through it, small steamers

Q Would they pass all the way around so that steamers could go, enter that slough from the lower end and go around

A. There was no difficulty except the large sycamore limbs that hung over the bank - the slough was 100 feet wide and many of the large limbs would interfere with large steamers or schooners going through excepting as they worked through gradually passing the limbs

Q Did not the large Sycamore limbs interfere to some extent to the navigation of steamboat Slough also,

A. I think they did, they were cut off.

Q Could steamers or Schooners in those days pass through Hensleys Slough and through Steamboat Slough,

A. Hensley Slough is not near so large as Steamboat Slough but with a depth of water I presume —

Q It was not so wide but it was deep } A. It was not so wide but the depth was sufficient for any boat to have gone through.

Q Was that much used by Steamers } A. No sir not much, only seldom

Q They could use it whenever they desired to do so

A. Well a steamer could not have used it unless the limbs had have been cut off so as to make any progress through it

They would have had to go
through it slow

Q You have seen steamers go
through } A. I have seen small
steamers go through, nothing
large

Q What steamers

A. Well I do not know as I can
recollect any name to them
that was in very early days—
Schooners I have known

Q When first did you notice
that the Sacramento River in
the bends had shown signs of
shoaling if you did notice it
and observed it }

A. All along about 1859 1860
and along about in that neigh-
borhood of time I could not
state exactly.

Q Now then I will ask you
whether those shoals could
not have commenced forming
before that time without your
having observed it

A. I do not know any reason
why they could not

Q Your use of the River was

Such as would call your attention strictly to the bottom of it in all places?

A. No sir nor only at my own place

Q

Re-direct Examination

~~for~~
J. B. Green

Mr Harr You say that a levee had been constructed across Hensleys slough? A. Yes sir
Q What is the condition of that slough, the bed of the slough at the time the levee was constructed?

A. The slough had filled up at the point where the levee crossed at the head of Randall Island within about three clear acres.

Q How much had it filled up? A. Well it had filled 27 or 28 feet.

Q 27 or 28 feet before the levee was constructed?

A. Yes sir

Q. How far down the slough did that filling continue

A. It filled at the head almost within three feet and further down the slough it left a little narrow slough about ten feet wide some seven or eight feet below the bank that was dry all the way through and dry all the way through and I should say that little slough that was left in the Centre, that is it was dry in the summer season, In the winter season when the water was bank full in the River it would flow over but in the summer it would be dry and the excavation or depression from the bottom of the soil to the top of the natural bank might have been six or seven feet.

Q That was a little slough

A. Yes that is the Centre of what was left of Hensleys slough after the filling at each end and all the way through

Q. The From the bottom of that little slough down to the bottom of the original Hensley slough what was the difference
 A Well Hensley slough in 1852 was 20 feet deep at low water

Q How far below the top of the bank } A Well that is about eleven feet, the banks are about the same

Q Well that would be eleven and twenty would be thirty one feet } A Well taking out the six feet — suppose there was six feet of depression, you would have to take that out and it would be twenty three or four feet

Q Between the bottom of the little slough in the middle and the bottom of Hensley slough originally

A. Yes sir

Q Now to what extent did you say did this filling continue } A Clear through the slough

Q Has that before any levee was built at all

A. Yes Sir

Q What was the character of the filling?

A. Sand and sediment, material that had floated down the River.

Q Has that slough filled up any since the levee was constructed?

A Ever since the levee was constructed.

Q It never has filled up any?

A No Sir the water was shut out of it.

Q What is the length of that slough? A. About two miles

Q That is from the place where it enters the River to where it enters it again

A. Yes Sir

Q What is the length of the place where you say there was a wharf where you say at the wharf the River is washed out some?

A. Well measuring up and down the bank of the River I do not positively know but probably two or three hundred feet.

Mr Gatlin There is one question I forgot to ask you, when did they first commence building levee on the opposite side of the River from where you reside there? A. I think very small levees were constructed in 1852 or 53, merely ditches dug and the bank thrown up.

Q Small levees in 1852 when did they begin to enlarge them? A. Well they have been at that ever since more or less, These levees were not continuous, they were only against certain places

— " —

Testimony -

John Shafer

Called for Plaintiff Sworn
Mr. Cadwalader Mr. Shafer
 where do you reside?

A. I live on Bannons' Slough.
 Q. Where is that?

A. Where I live it is about
 45 miles below the City of
 Sacramento

Q. What place on the river?

A. It is right at the mouth
 of Steamboat Slough, and
 Old River. My house is
 a half mile probably above
 the mouth

Q. What's the size of the
 island? A. About 8,000
 acres, a little less.

Q. Do you know where
 the Old Nevada was sunk?

A. Yes sir

Q. How is that in re-
 lation to the place where
 you live?

Q. That is on my place
 Q

My house is a half or three quarters of a mile above where the Nevada lays

Q. Where do the remains of that vessel lie, in regard to the surface of the water there now, or rather the bottom of the river? A. Well, the remains are largely there in the sand, When the vessel was sunk or about to sink, they ran her bow on the beach there, the stern settled down, and the bow sticks away up, it can be seen there yet - the remnants of her

Q. Where did you first settle there?

A. In the fall of 1852.

Q. What were you, an agriculturalist? A. Yes sir.

Q. ~~Are~~ Living on the banks of the river? A. Yes sir

Q. Was that land cultivated without levees & to 1862?

Objected to as leading.

Q. Did you or did you not cultivate that land up to 1862, with or without levees?

A. We did without any levees. I believe I did not get your question?

Q. Did or did not you cultivate your land down there without levees up to 1862?

A. Yes sir, we did

Q. Now what kind of crops did you raise? A. We raised vegetables generally - potatoes, cabbage, onions, and sweet potatoes

Q. Do you recollect the condition of the river bed when you went there?

A. Well, more or less, yes sir

Q. What changes have occurred in that river bed, say since 1861 from your place down to below Rio Vista? A. Well, there have ^{been}

great changes, filling up
the river, &c

Q. Filling up the river
bed? A. Yes sir, narrowing

Q. How much filling up
the river bed and how much
on the banks, proportionately
in regard to the bed of the
river, & the old banks?

A. Well, I would think
nearly one-half of the
carrying capacity of the
river had been destroyed
of the river bed, of the river
channel, I mean

Q. What was the depth
of water there originally,
and what is it now in
the channel, or I will
ask you what was the
depth of water there up
to 1866, that is including
the dry season of that year?

A. In 1866 I had occasion
to sound the waters, to sound
the river for a half a
mile, say, in front of
my house in 1866, it

was 16 feet of water - that was in 1866

Q. Low water season?

A. Yes sir

Q. What is it now at low water season?

A. It is about 6 feet. The tide ebbs and flows more or less, there, at low tide, I think not less than 6 feet

Q. Is your former estimate of 16 feet low tide?

A. Yes sir. Well, I would not be positive about low tide, the tide in the fall of the year, at a low stage of water

Q. Well, what you call a low stage, or the lowest stage - what do you make the fill at that point, and what is it composed of?

A. The fill is 10 feet to 12 feet.

Q. And what is it composed of? A. Sand principally

Q. What kind of sand?

A. It is a gray sand more or less, heavy sand; that is, in the channel, the banks are a lighter material, more earth,

Q. What is the character of the native soil down there? A. The native soil is black, ordinarily dark, very dark, rich soil

Q. How does that soil there compare with the soil on the banks of the river from here down?

A. Very much the same

Q. State when you first saw, if at all, a steamer aground in front of your place?

Objected to as leading

Q. State if you have ever seen a steamer aground? A. Yes sir

Q. When did you first see them? A. The steamer Capitol was the first that attracted my attention, that the river was shoaling

so fast, I think that was
in 1872

Q. Which way was she
going? A. She was going
down

Q. Going down?

A. She went aground
immediately in front
of my house

Q. Loaded or light ap-
parently? A. That I do
not know

Q. How long did she
remain there? A. She
remained there I think
an hour or two. It was in
the night.

Q. What other steamers
of equally large draught
have you seen pass
there before that time—
just mention, in a
general way?

A. Well I do not know
that I could call to mind
any equally large

Q. Did you ever know of
any trouble with the ravi-

gation there before?

Objected to as leading.

Q. What would you have to say about the capacity of the bed of the river there, to carry water as compared with its ^{carrying} capacity, say, when you went there in 1852?

Mr. Gattin He said that its carrying capacity was one-half destroyed.

Mr. Cadwalader What effect has the raising of the river channel had upon the drainage of the adjacent lands? A. It has had a very bad effect.

Q. What effect has it had upon the trees, stone fruit trees, growing in that neighborhood - were there any stone fruit trees down in that neighborhood?

A. There are a few - not many.

Q. Have you seen the effect of water upon any of them? A. Yes sir

Q. At what place?

A. The next place below me they have something of a peach orchard there, but it is dying out.

Q. When did it commence to die - what was the cause of it, if you know?

A. Well, it has been running down the last 4 years well, since the flood of 1878 I will say.

Q. What effect has that same cause had upon the other productions of that land? A. Well keeping the water so near the surface, it has a tendency to cause the alkali - all this valley land has more or less alkali in it, the water being continually so near the surface, the alkali has more of a tendency to rise to the top, and consequently the land does not produce

as it did years ago

Q. How in regard to marketing your produce down there - do you get them in sooner or later than you used to? A. Well, when there is not a flood we get the bank land in, quite as early probably as we did before

Q. Are you or are you not troubled at the planting season with seepage water?

A. Yes sir

Q. Well, don't that retard the planting? A. Much more so than formerly

Q. What effect does that have upon the growth of your produce?

A. It has a bad effect

Q. How in regard to the time of its maturity?

A. It does not mature so soon - well, naturally we cannot plant this land that is too wet, we cannot plant it so early

Q. How in regard to getting it into market?

A. I do not believe I understand that question

Q. How did the height of the flood of 1881 compare with the height of that of 1861 and '62? A. Well, I will say I was not there at the highest water in 1861 and 1862. I owned this property, and had it operated. I did not live there all the time

Q. What effect did the flood of 1881 have upon the lands upon that island

A. Well, it destroyed our levees, and they remained so, the land is principally under water now.

Q. That was the flood of 1881? A. Yes sir

Q. What effect did the flood of 1878 have?

A. It broke our levees. We rebuilt them the summer of 1878, and had the

land all in cultivation,
pretty much, last year,
not all, but a great por-
tion of it

Recess until 2 o'clock.

